A proposed framework towards developing a mental health support programme for professional South African rugby players

HB Grobler

orcid.org / 0000-0002-0264-5385

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Promotor:	Prof. K du Plooy
Co-Promotor:	Prof. P Kruger

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Student number: 23376600

DEDICATION

I dedicate this study to all the professional rugby players in South Africa who have to face mental health issues and still maintain a strong image on the field for the sake of their families, friends and supporters.

"It wasn't until later that I started to appreciate that
performance is just as much about the mind and mindset
and mental toughness as it is about the physical"
(Alan Stein Jnr)

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- I never know how God fits into a picture like this, but what I do know is that when I look back, I cannot believe what I have achieved and for that I honour Him.

For Arian and Hille-Olivia: Never give up, always pursue your dreams, work hard, excel and believe. It is only then that the impossible becomes possible. You can do it!

PREFACE

This thesis is presented in an article format in accordance with the guidelines set out in the *Manual for Postgraduates*, 2013, of the North-West University. The technical editing of the referencing was done according to the guidelines and requirements set out for the APA Referencing style in Chapter Two of the NWU *Manual*.

Articles are structured and submitted according to the specific guidelines provided by the accredited academic journals to which the articles are being submitted: *European Journal of Sport Science* (Article 1), *International Review of Sport and Exercise Psychology* (Article 2), and *Journal of Sport and Exercise Psychology* (Article 3). The guidelines for submission to these journals are attached in Addendum I.

DECLARATION BY THE RESEARCHER

I, Hermanus Bosman Grobler, herewith declare that the thesis entitled *A proposed framework towards* d*eveloping a mental health support programme for professional South African rugby players*, which I herewith submit to the North-West University Potchefstroom Campus, is my own work and that all references used or quoted have been indicated and acknowledged.

…… …….

Signature: H.B. Grobler Date: 10 April 2019

DECLARATION BY THE LANGUAGE EDITOR

I, Mari Grobler, hereby declare that I have language edited the PhD thesis with the title:

A proposed framework towards developing a mental health support programme for professional South African rugby players

for **HB Grobler** for the purpose of submission as a thesis.

Changes were suggested in the form of electronic track changes and comments. Implementation was left to the discretion of the author.

Please contact me, should there be any questions concerning the language editing of this study.

Yours sincerely

Mari Grobler

SATI membership no: 1002808

ABSTRACT

Rugby players may experience various difficulties that can have an impact on their mental health. The status of their mental health impacts their performance, and can be either conducive or detrimental. The need for a mental health support programme for rugby players is evident, especially for professional South African rugby players. Although there are various programmes available to support athletes in numerous ways, no specific programme exists that addresses the issue of mental health amongst professional South African rugby players.

The following research questions were formulated and addressed after the research topic was finalised, the literature study was completed, and brainstorming with the promoters took place: (a) What is the prevalence of common mental disorders amongst professional South African rugby players? (Article one); (b) What is the relationship between common mental disorders and mental toughness of professional South African rugby players? (Article one); (c) What are the experiences of professional South African rugby players with regard to stressors and mental health? (Article two); (d) How are stressors related to the prevalence of common mental disorders and mental health? (Article three); and (e) What aspects should be included in a mental health support programme for professional South African rugby players? (Section C).

The objectives of the study were: a) To describe the prevalence of common mental disorders amongst professional South African rugby players; b) To determine a relationaship between common mental disorders and mental toughness of professional South African rugby players; c) To explore the experiences of professional South African rugby players with regard to stressors and mental health; d) To determine how stressors are related to the prevalence of common mental disorders and mental health; and e) To identify aspects that should be included in a mental health support programme for professional South African rugby players.

The development, testing and evaluation process of the programme did not form part of this study, but will be addressed as an additional post-doctoral study.

A mixed methods programme development design was followed with the explanatory sequential design forming the basis thereof. In phase one, survey research was conducted by utilising sections of an existing questionnaire, describing the prevalence of common mental disorders amongst male professional South African rugby players (n=215) and also determining the relationship between common mental disorders and mental toughness of professional South African rugby players. For phase two of the research process, the qualitative design included the interpretive description design. The qualitative data were gathered by means of semi-structred interviews with professional South African rugby players (n=16), providing in-depth insight into the stressors they experience, as well as the relationship between stressors and mental health. Finally, in phase three, specific aspects were identified, which are included in a proposed framework for a mental health support programme for professional South African rugby players.

Results from the quantitative data indicated that the players mainly experience problems related to alcohol use (47.9%), distress (16.3%), sleep disturbances (7%) and anxiety/depression (4.2%). However, most of the players (96.7%) indicated that they perceive themselves to be mentally tough. A total of 4.7% of the players indicated that they smoke. A positive relationship was subsequently found between mental toughness and sound sleep (r=0.262) while negative relationships were found between mental toughness and anxiety/depression positive[1] (r=-0.423), anxiety/depression (r=-0.401), distress (r=-0.259) and common mental disorder problems in general (r=-0.220).

[1] In this context, "positive" refers to the last six questions in the questionnaire on anxiety/depression that were formulated in a positive manner, for example Have you recently felt that you were playing a useful role in things?

Findings from the qualitative data showed that all the players know what mental health entails and the importance thereof within the broader picture of wellness. They indicated that they experience various stressors on and off the field. However, the players showed that in general they have the capacity to enhance their own mental health, whether in personal circumstances or professionally on the field.

The players indicated a definite need for a mental health support programme even though at times their so-called ‘macho image’ may prevent some of them from seeking assistance.

KEY WORDS: Common mental disorders, mental health, mixed methods, professional rugby players, South Africa, support programme

OPSOMMING

Rugbyspelers kan verskillende uitdagings ervaar wat ’n impak het op hulle geestesgesondheid. Die toestand van hulle geestesgesondheid het ’n invloed op hulle spel, en kan óf waarde toevoeg tot hulle spel óf dit benadeel. Die behoefte aan ’n geestesgesondheidsondersteuningsprogram vir rugbyspelers is duidelik, veral vir professionele spelers. Alhoewel daar verskeie programme beskikbaar is om atlete op verskillende maniere te ondersteun, is daar geen spesifieke program wat die aspek van geestesgesondheid van professionele Suid-Afrikaanse rugbyspelers aanspreek nie.

Die volgende navorsingsvrae is geformuleer en aangespreek: (a) Wat is die voorkoms van algemene geestesgesondheidsindrome by professionele Suid-Afrikaanse rugbyspelers? (Artikel een); (b) Wat is die korrelasie tussen geestesgesondheidsindrome en geestestaaiheid van professionale Suid-Afrikaanse rugbyspelers? (Artikel een); (c) Wat is die ervaring van professionele Suid-Afrikaanse rugbyspelers ten opsigte van stressors en geestesgesondheid? (Artikel twee); (d) Hoe kan die verhouding tussen stressors en geestesgesondheid geïnterpreteer en verduidelik word? (Artikel drie); en (e) Watter aspekte behoort ingesluit te word in ’n geestesgesondheidsondersteuningsprogram vir professionele Suid-Afrikaanse rugbyspelers? (Afdeling C).

Die volgende hipoteses is geformuleer en aanvaar: (a) Daar sal ’n negatiewe korrelasie wees tussen die voorkoms van algemene geestesgesondheidsindrome en geestestaaiheid, en (b) Die identifisering van stressors en die verhouding tussen stressors en geestesgesondheid sal die ontwikkeling van ’n geestesgesondheidsondersteuningsprogram suksesvol begelei om beide geestesgesondheiduitdagings en geesteswelstand aan te spreek. Die ontwikkeling, toetsing en evalueringsproses van die program het nie deel uitgemaak van hierdie studie nie, maar sal aangespreek word in ’n addisionele studie.

'n Gemengde metode ontwikkelingsontwerp is gevolg deur 'n verduidelikende opeenvolgende ontwerp wat die basis daarvan gevorm het. Opname-navorsing is uitgevoer in fase een deur gebruik te maak van 'n bestaande vraelys wat die voorkoms van algemene geestessindrome onder manlike professionele Suid-Afrikaanse rugbyspelers (n=215) beskryf het en 'n korrelasie tussen geestessindrome en geestestaaiheid van professionel Suid-Afrikaanse rugbyspelers bepaal het. Vir fase twee van die navorsingsproses het die kwalitatiewe ontwerp 'n interpreterende beskrywingsontwerp ingesluit. Die kwalitatiewe data is ingesamel deur middel van semi-gestruktureerde onderhoude met professionele Suid-Afrikaanse rugbyspelers (n=16), en het omvattende insig verskaf ten opsigte van die stressors wat hulle ervaar en die verhouding tussen stressors en geestesgesondheid. Laastens, in fase drie is spesifieke aspekte geïdentifiseer wat ingesluit is in die konsep geestesgesondheidsondersteuningsprogram vir professionele Suid-Afrikaanse rugbyspelers.

Resultate van die kwantitatiewe data het aangedui dat die spelers spesifieke probleme ervaar met betrekking tot die gebruik van alkohol (47.9%), stres (16.3%), slaapversteurings (7%) en angs/depressie (4.2%). 'n Totaal van 4.7% van die spelers het ook aangedui dat hulle rook. Die meeste spelers (96.7%) het nogtans aangedui dat hulle hulself as taai beskou in terme van geestesgesondheid. 'n Positiewe korrelasie is gevolglik gevind tussen kognitiewe taaiheid en 'n goeie nagrus (r=0.262) terwyl 'n negatiewe korrelasie gevind is tussen kognitiewe taaiheid en angs/depressie positief (r=-0.423), angs en depressie (r=-0.401), stress (r=-0.259) en algemene geestessindrome (r=-0.220).

Bevindings vanuit die kwalitatiewe data het aangedui dat al die spelers bewus is van wat geestesgesondheid behels en hulle besef die belangrikheid daarvan binne die breër prentjie van welstand. Hulle het aangedui dat hulle verskeie stressors op die veld ervaar en ook af van die veld. Die spelers het egter getoon dat hulle in die algemeen oor die kapasiteit beskik om hulle eie geestesgesondheid te verbeter in hulle persoonlike omstandighede en professioneel op die veld.

Die spelers ervaar ’n definitiewe behoefte vir ’n geestesgesondheidsondersteuningsprogram alhoewel hulle aangedui het dat hulle sogenaamde “macho-beeld” sommige van hulle met tye daarvan weerhou om ondersteuning te aanvaar.

SLEUTELTERME: Algemene geestessindrome, geestesgesondheid, gemengde metode, professionele rugbyspelers, Suid-Afrika, ondersteuningsprogramme

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Introduction to the study – A proposed framework for a mental health support programme for professional South African rugby players: A mixed methods study

Introduction and General Background Information

Sport is highlighted as a prominent and important phenomenon in many countries world wide and billions of dollars are spent annually on the sport industry (Giampiccoli, Lee, & Nauright, 2015). The important role of sport in the history of South Africa is also evident (Chari, 2017; Nongogo, Goslin, & Van Wyk, 2014). According to a review by SouthAfrica.info (2012), sport is described as a 'national religion' for South Africans that unites the country – it transcends language, politics or race. Ultimately, it has the power to heal wounds. This is especially true in the game of rugby, evident in 1995 during the Rugby World Cup where sport was again highlighted as historically important for this country, referring to its ability to unite a country.

In South Africa, the South African Rugby Union (SARU) is responsible for professional rugby players. SARU is registered with the South African Sports Confederation and Olympic Committee (SASCOC) as the governing body of rugby unions in the country and consists of 14 provincial unions representing the different rugby teams. All of the professional rugby players in South Africa are registered with the official MyPlayers rugby organisation (n.d.). MyPlayers is primarily responsible for improving the lives and general welfare of professional South African rugby players by looking after the interests of rugby players, such as their commercial, industrial, brand and communication, financial and player career development aspects. Although MyPlayers has specific support services available to their members, such as career development and a mental health support helpline, there is currently neither information available regarding

the mental health status of these rugby players nor a support programme that is specifically customised to facilitate the mental health and consequently, the psychological wellbeing and on-field performance of these rugby players.

For the purpose of this study, mental health problems refer to symptoms of common mental disorders (CMDs). The focus on CMDs was motivated by a study carried out by Gouttebarge, Kerkhoffs, and Lambert (2016) who investigated the prevalence and determinants of symptoms of CMDs in retired professional rugby union players. They further aimed to explore the possible association between stressors and health conditions. The study population included participants from France, Ireland and South Africa. Results indicated an increase in the prevalence of symptoms related to CMDs with a significant association between a higher number of life events and distress, anxiety/depression, sleeping disturbances and adverse nutrition behaviour.

The meaning of mental health. In order to develop a mental health support programme for rugby players, it should be clarified what is meant by 'mental health' for the purpose of this study. Defining mental health is not an easy task, as there are numerous definitions available in literature. According to the World Health Organization (WHO), mental health refers to a state of well-being. Within this state, individuals come to realise their own potential; they are able to cope with daily stressors efficiently, be productive in their work environment and can contribute to their community (WHO, 2014). Promoting Mental Health (2004) goes further to state that mental health is not merely the absence of illness, but is intimately connected with physical health and behaviour. It forms, therefore, an integral part of general health. Moreover, mental health is viewed as the foundation of well-being. In this sense, it is expected of individuals and communities to function effectively in society. The manner in which individuals function effectively can again be linked to their resiliency, which is a term that is strongly associated with

sport achievement and mental health (Hosseini & Besharat, 2010). The Mental Health Commission of the Government of Western Australia (n.d.) defines mental health in a very similar manner by stating that mental health is a sense of well-being. It centres on confidence and self-esteem and enables people not to only enjoy and appreciate others, but also the environment and day-to-day life. According to this commission, mentally healthy individuals can form optimal relationships; they can use their abilities to reach potential; and can deal with life's challenges in a resilient manner.

In defining mental health, it is important to note that for the purpose of this study, mental health problems and mental illness were not viewed as similar concepts. The Government of Western Australia's Mental Health Commission (n.d.) effectively makes a distinction between these two concepts by stating the following: A mental illness is diagnosed according to certain standardised criteria, but, mental health problems – although also affecting how people think, feel, and behave – occur to a lesser degree. Similar to international definitions of mental health, the South African Mental Health Care Act (17 of 2002) also defines mental health within the parameters of physical, social and psychological factors.

Manwell et al. (2015) concluded that the way in which mental health is defined will depend on the epistemological framework through which it was developed. Such a framework was, therefore, necessary to clarify the focus of the study and to position the study in literature. Furthermore, a framework can assist researchers in making explicit assumptions and to allow the testing of these assumptions (Forman, 2016). The framework used in this study was identified by means of the researcher's experience and life paradigm based on Gestalt theory. Through this paradigm, a holistic view is applied when working with individuals and communities. The researcher linked, therefore, his paradigm, which focuses on holism (Perls, Hefferline, &

Goodman, 1951; Yontef, 1993), to the definitions of mental health, as it is decribed above, where the focus was on well-being that is also viewed as holistic in nature where the focus is not only on one aspect (physical), but on other areas as well (e.g., cognitive and behavioural). From this stance, the researcher deemed it necessary to focus on individuals, but to ultimately link the findings back to a specific group in order to restore the whole, linking it to the whole that is greater than the sum of its parts, as described by Kirchner (2000). In order for a community (rugby team) to benefit, the intial focus on individuals (rugby players), needs to be connected to the bigger community (the team).

In line with the paradigm described above, a theoretical framework (Field theory, as a component of Gestalt theory) was applied to focus on the nature of this study. According to Yontef (1993), the essential property of a field lies in its dynamic nature and the interrelatedness of its parts. If something happens to one part, the whole field is affected. This assessment of Yontef was applied in this study, especially in light of rugby players being part of a team – representing a particular country – as well as personal and familial relationships. When the mental health of players is affected, it will surely have an influence on the rest of the field (environment) and that again may have a huge impact on the players. Furthermore, Field theory supports the notion that persons may experience reality in an individual and unique way. Both the paradigm and theoretical framework assisted in determining the methodological approach and methods of data collection.

Mental health and the pressure to perform. Rugby players are as a result often viewed as heroes and are expected to constantly perform well. It is within these and other expectations that rugby players may experience various difficulties that can have an impact on their mental health. The status of their mental health impacts their performance, and can be either conducive

or detrimental towards their performances. Rugby players perform under enormous pressure (Head games, 2015; Hill, Matthews, & Senior, 2016) and they are in need of strategies to stay calm in order to perform optimally. According to Anderson, Miles, Mahoney, and Robinson (2002) together with Vealy (2007), performance enhancement is important, but a holistic approach to the well-being of players is essential. In an interview between Nokkonen (2017) and the mental skills coach of the All Blacks, Gilbert Enoka, he emphasised the importance of a holistic approach that focuses not only on physical performance, but also includes the mental side of the sport. His work should be recognised as part of the success story of All Black performances in recent years. However, the importance of mental health in sport is not equally recognised everywhere, sometimes due to the stigma attached to mental health, as it is often perceived that players who suffer from mental health-related difficulties are 'weak' (Etzel & Watson, 2007; Gavrilova & Donohue, 2018). It is, therefore, of the utmost importance to change this perception in South Africa in order to improve the overall mental health of individual rugby players, which should in turn have a beneficial effect on on-field performances as well.

According to Head Games (2015) and (Cooper, Howes, Munson, Rae, & Shepherd, 2017), the mental health of rugby players is important, as the pressure on these players to perform optimally is enormous. There rests a huge obligation on the players to perform well on an ongoing basis, which may occasionally linger in their minds during an important game. Such interferences may have a detrimental influence on the mental coping of the players, which in turn may also influence their game performance quite negatively. Donohue et al. (2015) together with Foskett and Longstaff (2018), emphasise the presence of certain stressors that may interfere with the performance of sportsmen and sportswomen (Nicholls, Jones, Polman, & Borkoles, 2009). The various mental health interventions available to address stressors and enhance mental health in various sport populations (Miller, Zweben, & Johnson, 2005), are currently overshadowed by

a specific need for customised mental health interventions for specific groups, such as professional South African rugby players (Donohue et al., 2016; Goodheart, 2011). This need emphasises the important relationship between mental health and sports participation and that sportsmen and sportswomen realise the important role that mental health plays in sport.

The relationship between mental health and sports participation. Existing research shows a correlation between sports participation and mentally healthy individuals. Gotova (2015) highlights that physical, emotional and human development are supported by participation in sports activities. An advisory report on Physical Activity Guidelines for Americans (2008) indicates that more than 100 population-based observational studies published since 1995 have emphasised an association between physical activity and reduced symptoms of depression. Some of these studies include research carried out by by Sanders, Field, Diego, and Kaplan (2000); Gore, Farrell, and Gordon (2001); Boone and Leadbeater (2006); and Brunet et al. (2014). According to Knapen, Vancampfort, Moriën, and Marchal (2015), physical exercise may be excellent treatment for an array of physical and mental health problems. A study by Marlier et al. (2015) confirms this correlation – their findings indicate that there is indeed an association between sports participation and better mental well-being. Interestingly enough, it was found in another study that this optimal correlation only applies to team sport and not individual sports participation (Sabiston et al., 2016). Eime, Young, Harvey, Charity, and Payne (2013) concur that this can be due to the presence of a protection factor in team sport where teams work together towards a shared goal. This optimal effect of team sport on mental health, and specifically depression, is also supported by research carried out by Boone and Leadbeater (2006). In their research, Sabiston et al. (2016) indicated a positive correlation between the number of years participating in team sport and lower depressive symptoms. Furthermore, lower

depressive symptoms in early adulthood with adolescents who participated longer in team sport during secondary school were found.

A South African study by Lyoka (2011) on the impact of intermittent physical exercise on the mental health of police officers, indicated that the management of stress, anxiety and anger can be improved by well-organised intermittent physical exercises. This optimal effect is also evident in sport activities. In a study by Van Hout, Young, and Hooft (2013), it was found that the adolescent participants perceived an optimal relationship between mental health and participation in sport. Malebo, Van Eeden and Wissing (2007) concluded in their study on sports participation, psychological well-being and psychosocial development, that young black adults who participate actively in sports show lower levels of negative affect, somatic symptoms, depressive symptoms and pessimism than those who do not actively participate in sports. The participants also showed higher levels of positive affect, a sense of coherence and self-efficacy beliefs. In a study done by Edwards, Steyn, Buscombe, Edwards, and Denyer (2014), Bull's Mental Skills Questionnaire was tested for standardisation in South Africa and the United Kingdom. The research was viewed as important, because mental skills seem to be vital for contemporary life, health and well-being. The accurate assessment of mental skills, according to these authors, is crucial for health and sport development. The same questionnaire was used by Kruger, Edwards and Edwards (2013) to establish preliminary norms for South African university students playing soccer, netball, rugby, cricket, hockey and athletics.

Unfortunately, the above-mentioned research results are not an indication that individuals who are actively involved in sport may not experience mental health problems. On the contrary, it is evident that mental health problems are prevalent amongst sportsmen and sportswomen around the world. In a narrative systematic review done by Rice et al. (2016), it was found that elite athletes experience a high prevalence of mental disorders with a vulnerability to a range of

mental health problems. This finding indicates the importance of an awareness of the needs of athletes with regard to mental health-related aspects. According to Arnold and Fletcher (2012), athletes are exposed to more than 600 kinds of different stressors related to common mental disorders.

Another aspect that contributes to stressors related to CMDs is drug abuse. The outcomes of studies that have been conducted seem to underestimate the problem of drug abuse in sport due to the relatively small sample populations (Lippi, Franchini, & Guidi, 2008). In a South African study by Surujlal, Nolan, and Unabe (2012) with university students, it was found that athletes – especially male athletes – consume high quantities of alcohol with severe implications for their health, academic achievements, social development and sport performance. An additional issue with regard to drug abuse is highlighted by Mottram (2011) who found that the abuse of performance-enhancing drugs in sport is evident. However, meaningful data on the prevalence of performance-enhancing drugs are difficult to obtain due to the sensitivity of the matter.

Purpose of the Study

With the above discussion in mind, it was important to gain an understanding of how mental health is perceived by professional South African rugby players in order to provide support to enable them to excel in and maintain a healthy and balanced lifestyle as sports personalities. This need was both voiced by SARPA and the MyPlayers organisation: To determine the prevalence of mental health symptoms of their rugby players and to explore mental health stressors and the causes thereof. Ultimately, there is a dire need for a mental health support programme for these rugby players to address stressors. This need for mental health support was echoed by Terblanche, CEO of the South African Rugby Legends Association

(SARLA), when a 24-hour mental health helpline was launched for rugby players (2017) after the death of the Wallabies player Dan Vickerman.

In the United Kingdom in 2012, the Rugby Players Association (RPA) started a 24/7 helpline for RPA members in collaboration with Cognacity (a group of experts in mental well-being and people performance) to assist players with coping with injuries, stress, anxiety, depression, addiction, anger management, and career transition. Currently, the RPA also provides each rugby union club in England and Wales with a player development manager who looks after the players of that club and promotes the RPA services. The RPA also presents annual mandatory workshops on topics, such as substance use, mental resilience and psychological well-being. The National Rugby League (NRL) and the Rugby League Players Association (RLPA) in Australia and New Zealand both offer counselling services to players and family members (Leaguewise Wellbeing and Education, n.d.). All NRL clubs in Australia have a Welfare and Education Manager and Careers Coach and players and their immediate family members have access to a free, private and confidential counselling service (NRL State of Mind, n.d.). Mandatory workshops for all players are also presented on topics, such as social media, mental well-being, cultural awareness, alcohol, and respectful relationships (Wellbeing and Education, n.d.). As mentioned before, the intervention of the mental skills coach, Gilbert Enoka, with the All Blacks is admirable and in Scottish rugby, an official player welfare programme was launched in March 2018. As such, the purpose of the present study was to gain a clear understanding of the current mental health status and needs of professional South African rugby players and to utilise this information to develop a proposed framework for a mental health support programme. Such a programme can then be presented to SARU and MyPlayers in the hope that it can be implemented in order to assist all professional South African rugby players in the future from a mental health perspective.

Motivation and Significance

The outcome of the study conducted by Gouttebarge, Kerkhoffs, and Lambert (2016) motivated a team of researchers at the Institute of Psychology and Wellbeing (IPW) at the North-West University, Potchefstroom Campus, to conduct a similar study using professional rugby players in South Africa. This initiative was also supported by the South African Rugby Players Association (SARPA) (a division of the MyPlayers organisation), as they view it as important to have a support programme in place for their rugby players in terms of mental health. The rationale behind this study was, therefore, to focus on the specific needs identified by the above-mentioned organisations. It is also rare that access to these players (especially such large numbers) was allowed for the purpose of research, so this study was the first of its kind in the country on mental health representing a large number of professional rugby union players.

Although other South African studies (Edwards & Edwards, 2012; Kruger, Du Plooy, & Kruger, 2018; Kruger, Potgieter, Malan, & Steyn, 2010; Laureano, Grobbelaar, & Nienaber, 2014) explored aspects of the focus of the current study, not a single study has been undertaken with a specific focus on elite professional rugby players at national level. If the mental health stressors of South African provincial rugby players are known and explained, a support programme can be developed. The programme will specifically address the needs voiced by the national rugby players by means of different interventions, such as workshops and seminars. This will be a significant contribution to this specific context, as rugby players will then receive the necessary support, which may ultimately have an effect on their personal well-being/mental health, family life and game performance.

Problem Statement

It is apparent from the aforementioned discussions, the need for a mental health support programme for rugby players is evident, and especially for professional South African rugby players. Although there are various programmes available to support athletes in numerous ways, no specific programme exists that addresses the issue of mental health amongst professional South African rugby players.

Research Questions

To develop a programme as alluded to in the previous section, the following research questions were formulated and addressed in the three articles in Section B:

- What is the prevalence of common mental disorders amongst professional South African rugby players? (Article one)
- What is the relationship between common mental disorders and mental toughness of professional South African rugby players? (Article one)
- What are the experiences of professional South African rugby players with regard to stressors and mental health? (Article two)
- How are stressors related to the prevalence of CMD and mental health? (Article three)
- What aspects should be included in a mental health support programme for professional South African rugby players? (Section C)

Research Objectives

The objectives of the study were:

- To describe the prevalence of common mental disorders amongst professional South African rugby players.

- To determine a relationship between common mental disorders and mental toughness of professional South African rugby players.
- To explore the experiences of professional South African rugby players with regard to stressors and mental health.
- To determine how stressors are related to the prevalence of common mental disorders and mental health.
- To identify aspects that should be included in a mental health support programme for professional South African rugby players.

The outcomes of the objectives will be utilised to support professional South African rugby players. The field of psychology may gain insight into factors that cause stressors in rugby players and will have a better understanding of the dynamics of mental health amongst professional South African rugby players. The outcomes of the study may assist SARPA and MyPlayers in supporting the players and hopefully improving game performance.

Methodology

The following sections highlight various aspects relating to the methodology that were used to complete the study.

Research approach and design. Mixed methods designs are designs in which both quantitative and qualitative data are used in an integrated manner. Interpretations are then formulated, based on the combined strengths of quantitative and qualitative data (Creswell, 2015). A mixed methods approach was deemed appropriate for the purpose of this study, as the researcher did not only want to determine stressors, but also to explore the dynamics behind the causes of stressors.

The specific mixed methods design chosen for this study, is the mixed methods programme development design with the explanatory sequential design forming the basis

thereof. This type of design is described by Plano Clark and Ivankova (2016) as a complex design due to another methodology (programme development) added to the basic explanatory sequential design. This design is applicable when quantitative data are gathered first. Integration takes place by shaping the qualitative questions based on the quantitative results (Watkins & Gioia, 2015). Qualitative methods are, therefore, used to explain quantitative results more comprehensively (Creswell, 2015).

Survey research (Bordens & Abbott, 2008) was conducted within a mixed methods design by utilising sections of an existing questionnaire, that was established by its authors by making use of validated questionnaires. This formed phase one of the research process. By means of the quantitative data the researcher was able to describe the prevalence of common mental disorders amongst a sample of professional South African rugby players and also to determine the relationship between common mental disorders and mental toughness of professional South African rugby players. These processes are described in article one of Section B.

For phase two of the research process, the qualitative design included the interpretive descriptive design, as described by Thorne (2008). According to this author, interpretive descriptive designs not only explore elements of a common issue, but also try to understand these elements in order to honour their complexity. In this study, the researcher not only wanted to explore the experiences of professional South African rugby players with regard to stressors and mental health, but also to interpret and explain the relationship between stressors and mental health. The qualitative data provided in-depth insight into the stressors that professional South African rugby players experience, as well as the relationship between stressors and mental health.

Finally, in phase three, specific aspects were identified. These aspects are included in a proposed framework for a mental health support programme for professional South African rugby players. The design can be schematically described as follows:

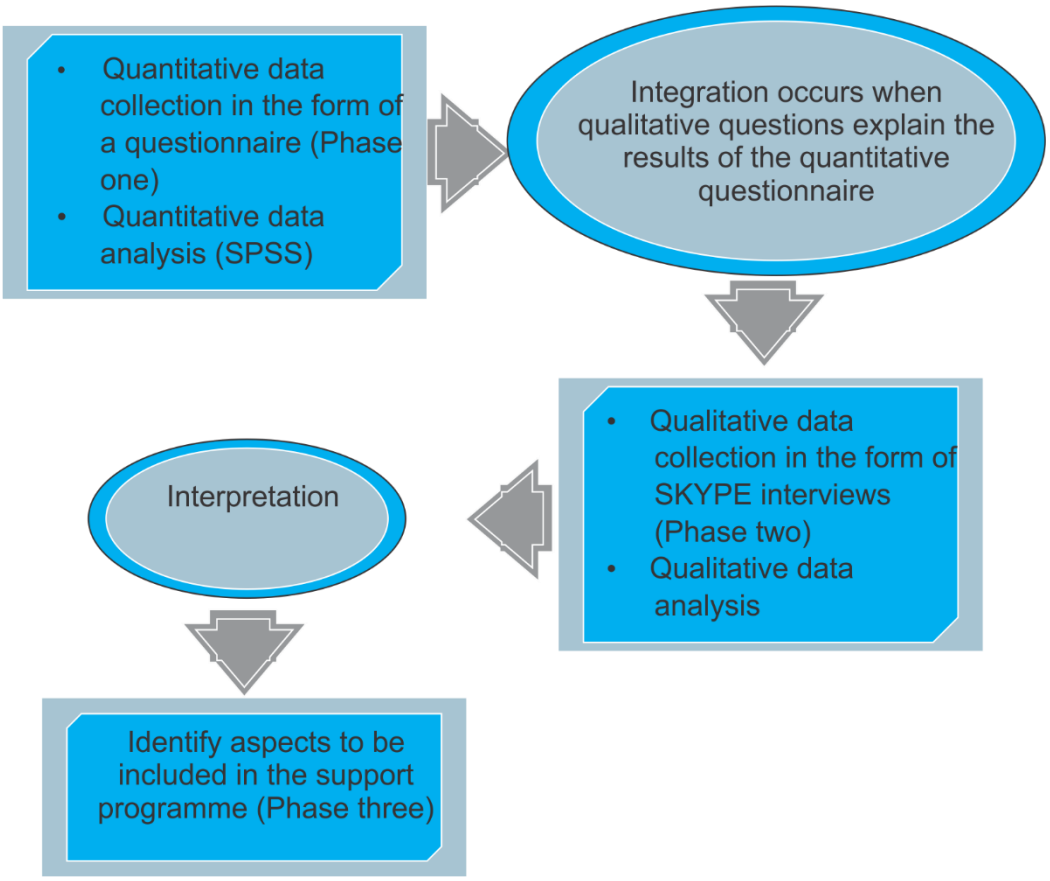

Figure 1: Diagram of mixed methods programme development design applied in the study

Population. The target population was 940 registered professional South African rugby players. An email containing an invitation to participate was sent to all the players. For the quantitative component of the study 215 rugby players responded and formed part of a purposive sample. The players gave informed consent and completed the online questionnaire (see Addendum II). The players also had to indicate their skype addresses on the answer sheet if they

were willing to take part in an interview. The qualitative sample consisted of 16 players who gave informed consent and participated in the semi-structured Skype interviews.

Inclusion criteria:

- Current professional South African rugby players.
- Players who can communicate in English (in writing and verbally).

Female rugby players were not included in the study, as the current South African women teams – except for the national teams, such as the Springbok Women's Sevens team – are not currently fully professional players. Although all of the unions have female rugby teams, the teams are mostly still amateur at present. Stressors that influence amateur teams differ from professional teams, especially in light of the fact that playing rugby is the main income of professional team players.

Recruitment and sampling. The director of the IPW contacted the management of MyPlayers and provided an outline of the study. MyPlayers agreed in writing for the study to be conducted with professional South African rugby players. The rugby players were informed by MyPlayers that they would be contacted with regard to a study on mental health support.

For the quantitative part of the study, non-randomised sampling was appropriate where the participants were self-selected volunteers. The researcher did not select the participants, they 'selected' themselves to participate in the survey. Linking non-randomised sampling with Internet research is common in research (Bordens & Abbott, 2008) and was, therefore, also appropriate for this study in which the participants completed online questionnaires by means of Google Docs. An email with instructions was sent to the mediator who then distributed the email to the players. The email briefly explained the aim of the research and included a consent form. After reading the consent form, the players who wanted to participate clicked on a link, which

directed them to the electronic questionnaire on Google Docs. No biographical information was asked, as it may have prevented players from participating due to the sensitivity of the topic. After completion of the questionnaire, the players provided their Skype details on the form if they were willing to participate in a Skype interview. The completed questionnaires were automatically and anonomously saved on a secure electronic server that only the researcher had access to. The anonomous questionnaires were then forwarded to the statistician to assist with the data analysis. In no way was it possible for any participant to be linked to a specific questionnaire, except for the participants who indicated their Skype address on their completed questionnaire. These players were aware of the fact that the researcher would be able to identify them. However, there was no need to know the answers of specific players.

The qualitative sample was based on voluntary purposive sampling. According to Botma, Greeff, Mulaudzi, and Wright (2010), purposive sampling is typical of explorative and descriptive studies. This fitted well with the qualitative nature of this study. Sixteen players were willing to participate in interviews. These players were contacted to schedule Skype interview appointments. The interviews took longer to conduct than anticipated due to the full programmes of the players. In stead of an anticipated two or three months, the interviews were conducted over a period of nine months.

Methods

Phase one: Online questionnaire. The questionnaire was compiled in English and took approximately 15 to 20 minutes to complete. Symptoms of CMDs that were addressed in the questionnaire included: Distress, anxiety/depression, sleeping disturbances, adverse alcohol behaviour, and whether the players smoke or not. The questionnaire consisted of various smaller questionnaires used by Gouttebarge et al. (2016) in a similar study conducted with retired professional rugby union players. The authors gave permission for the questionnaire to be used

in this study. Their questionnaire, which was adapted for the purpose of this study, was compiled by making use of sections of existing validated questionnaires.

Phase two: Semi-structured Skype interviews. The participants had the choice to have the camera activated or not. All of them preferred the camera on. It was only during bad connections where the camera was switched off to improve communication.

The following eight questions were asked with probes and follow-up questions:

- What comes to mind if I make the following statement: "Mental health amongst professional South African rugby players"?
- What would you view as issues/situations that are stressors in the lives of professional rugby players?
- What stressors do you experience as a professional rugby player?
- How do you see these stressors impacting on your mental health?
- What do you do to enhance your personal mental health?
- What do you do to enhance your psychological on-field performance?
- What do you know about any current support mechanisms that have been put in place for professional South African rugby players to address their mental health challenges?
- What do you believe should be included in a mental health support programme for professional South African rugby players?

The goal of the interviews was to obtain comprehensive detail with regard to the answers received when the quantitative questionnaire on CMDs was completed. The questionnaire clearly indicated the presence of CMDs and the researcher wanted to obtain more information on the stressors behind the CMDs. Moreover, it was important to know how the players view mental health, how they experience it and what actions they take. Furthermore, the researcher wanted to investigate current support mechanisms and what the players would personally like to include in

a mental health support programme for professional South African rugby players. The interviews were approximately 20 to 25 minutes long.

Phase three: The proposed framework for a support programme. The final development and evaluation of the proposed draft programme were not included in this study. However, the proposed draft programme has been sent to relevant experts for their input. The programme will be applied as intervention in a follow-up study, and will also be evaluated at a later stage. Aspects identified by the players as important to be included in a support programme, are discussed in Section C of this thesis with specific reference to the feedback of the evaluators.

Certain steps of the Delphi technique (Hampshaw, Cooke, & Mott, 2018) were followed for structure (see Section C for the steps) and to identify relevant information to be included in the proposed framework for a mental health support programme. The researcher himself acted as a facilitator during this process, as the evaluators were not participants. In the first step, a team of experts was identified. The experts included professionals with experience in the sport environment, and coaches who work with professional rugby players. The professionals who participated were:

- Prof. Ankebe Kruger who is a psychologist specialising in sport at the North-West University, Potchefstroom Campus, South Africa.
- Dr Jan Rauch, a sport psychologist at the Institute for Applied Psychology at the Zurich University of Applied Sciences, Switzerland.
- Dr David John Edwards, a clinical psychologist in the United Kingdom, specialising in mental well-being and performance, especially in the sport environment.
- Mr Jonathan Makuena, coach of the Leopards national rugby team. Mr Andre Pretorius, Assistant Coach of the Leopards Currie Cup and NWU-Pukke Varsity Cup rugby teams.

- Mr Jaco Pienaar, the Sharks Super Rugby forwards coach.
- Additionally, due to their experience within the professional rugby environment, the promoter and co-promoter also provided input:
- Prof. Pieter Kruger, a Sports Scientist and Consultant Clinical Psychologist from the Institute of Psychology & Wellbeing, NWU with extensive experience working in multi-national elite rugby performance and well-being: London Harlequins (10 seasons, UK), Brumbies Super Rugby (one season, Australia), Springboks Rugby World Cup 2015 (Bronze medal winners), Springbok Sevens (two seasons – World Series Champions), Sharks Super Rugby (two seasons, South Africa), Sharks Currie Cup (one season, Champions), Munster Rugby (one season, Ireland), English Premier Rugby (Mental Health & Wellbeing service provider – five years).
- Prof Kobus du Plooy, a Clinical Psychologist from the Institute of Psychology & Wellbeing, NWU with experience working at university and national elite rugby performance & wellbeing: Springbok Women's Sevens (four seasons, African Champions) and NWU-PUKKE Varsity Cup (two seasons, silver medal winners).

In step two, a clear problem formulation and a short background of the study (see Addendum III) were formulated and sent to the expert evaluators in an email. Additionally, an outline of the proposed programme was provided (see Addendum IV).

During step three, the evaluators were asked to indicate which aspects of the programme would be relevant, which aspects should be adapted to be more relevant, and which aspects are not relevant at all (see Addendum V).

During step four the feedback was integrated and applied to the proposed programme and the necessary adaptations were made. In general, the expert evaluators found the suggested programme to be valuable and only a few recommendadtions were made (see Section C). The

programme was finalised and will be presented to MyPlayers, SARPA, coaches and players (step 5). Testing and further refinement was not part of this study.

Data analysis

Data analysis for the quantitative research was based on SPSS statistics software. Statistical Services at the North-West University, Potchefstroom Campus, assisted with the quantitative data management. In order to determine the suitability of the quantitative data, preliminary analyses (internal consistency, normality, and homogeneity of variance) were performed to determine whether the measures and data were appropriate for non-parametric analyses. Bivariate analyses were completed between each of the stressors and the mental health variables (Spearman's rank correlations).

The qualitative data were thematically analysed by the researcher and a co-coder (see Addendum VII for example). The co-coder was Dr Andrea Daniels, a postdoc fellow. An interpretive descriptive analysis, as described by Thorne (2008), was done with the focus on inductive reasoning. The researcher preferred a manual analysis by immersing himself with the data by doing the transcriptions himself with the assistance of another independent researcher. Data were transcribed electronically and the transcriptions were saved in a file on the researcher's computer. Although coding forms an important part of an analysis process, the researcher tried to avoid premature coding and sorting. The coding process of open coding, axial coding and selective coding was followed as the first order analysis. The researcher tried to ensure broad-based coding (Thorne, 2008) by not being too specific too soon in generating the codes. From these jotted down codes certain patterns were identified. However, a second order of analysis continued where the researcher looked at possible relationships between the patterns. This was possible by really being involved with the data himself. In this process, groupings of patterns were reflected on and the possibility of a re-grouping was considered. The researcher

also followed a process of reflecting on the analysed data and asking questions to determine whether certain groupings were actually true to the broader context of the analysed data, and not merely relevant to one or two individuals.

Validity and Reliability

Sections of validated standardised questionnaires were used to compile the electronic version used in this study. The original version, which consisted of sections of validated questionnaires, was compiled by Gouttebarge et al. (2016) and has previously been administered on South African players as well. Certain sections of the following instruments were used to determine symptoms of CMDs:

- **Distress:** The Distress Screener (three items), which is based on the Four-dimensional Symptom Questionnaire (4DSQ). This questionnaire has been validated in English (test-retest coefficients ≥ 0.89; criterion-related validity: Area Under Receiver Operating Characteristic (ROC) Curve ≥ 0.79) (Braam et al., 2009; Terluin et al., 2006).
- **Anxiety/Depression:** The 12-item General Health Questionnaire (GHQ-12) (six items) has been validated in English (criterion-related validity: sensitivity ≥ 0.70, specificity ≥ 0.75, Area Under ROC Curve ≥ 0.83) (Goldberg et al., 1997).
- **Sleeping disturbances:** The Patient Reported Outcomes Measurement Information System (PROMIS) (two items) (Yu et al., 2011) Questionnaire has been validated in English (construct validity: product-moment correlations ≥ 0.96.
- **Adverse alcohol behaviour:** The Alcohol Use Disorders Identification test (AUDIT-C) (three items) has been validated in English (criterion-related validity: Area Under ROC Curve 0.70 – 0.97) (Dawson, Grant, Stinson &Zhou, 2005; De Meneses-gaya, Waldo Zuardi, Loreiro, & Crippa, 2009).
- **Smoking:** A single question was asked: Do you smoke? (Yes or No).

The following instrument was used to determine mental toughness:

- **Mental Toughness Index:** The Mental Toughness Index (Gucciardi, Hanton, Gordon, Mallett, & Temby, 2015) was used to assess the personal psychological resource deficiencies of the players. The 8-item scale is rated on a 7-point scale from 1 (*false, 100% of the time*) to 7 (*true, 100% of the time*). The initial validation study (Guccardi et al., 2015) and subsequent studies (e.g., Gucciardi, Zhang, Ponnusamy, Si, & Stenling, 2016) have found that construct validity supports the instrument, along with evidence of convergent and incremental validity. Appropriate internal consistency ($\alpha = .79$), composite reliability ($\rho = .86$ to $.89$), and omega coefficients ($\omega = .82$ to $.89$) for the measure have been demonstrated in several athlete studies (Gucciardi et al., 2015; Gucciardi et al., 2016; Mahoney, Gucciardi, Ntoumanis, & Mallet, 2014). Although there are more elaborate MT scales available, this scale seemed to be the best option considering the limited time players had available for participating in the study.

Trustworthiness

In order for the qualitative findings to be valid, the following aspects were attended to:

The mixed methods design in itself added to the validation of the study and is based on the logic of triangulation (Green & Thorogood, 2014).

According to Thorne (2008), certain evaluative criteria are necessary with regard to the trustworthiness of research. Firstly, qualitative research must reflect epistemological integrity. The researcher ensured that the findings showed compatibility with the research questions asked, which in turn were linked back to the theoretical paradigm of the study. Secondly, representative credibility is shown by the use of mixed methods research, indicating the triangulation of findings. Thirdly, analytic knowledge is evident – the researcher shows concretely in his data

analysis how reasoning took place to move from initial codes to patterns, relationships and eventual themes. Lastly, interpretive authority is necessary by showing that the interpretations of researchers can be trusted. This was done by clarification during the interviews to ensure that what the researcher heard was actually what was meant by the participants.

Furthermore, triangulation improved the trustworthiness of the study, due to the use of a mixed methods approach where both quantitative and qualitative data were used to develop themes and certain conclusions. According to Creswell (2014), triangulation in mixed methods research refers to the use of different data sources of information that will lead to the building of a coherent justification for themes.

Ethical Considerations

Ethical approval was obtained from the Health Research Ethics Committee (HREC) of the Faculty of Health Sciences, North-West University, Potchefstroom Campus. The clearance number is: NWU-00359-16-A1. Written permission was also obtained from MyPlayers and SARPA.

A possible risk of this specific design was that the rugby players would not be willing to participate in the qualitative part of the study due to the concern that they may be identified and discriminated against by the coaches with regards to team selection. As a precaution, the coaches were not informed whom of the players indicated that they would be willing to participate in the study. In addition, the gatekeeper (chief executive officer of MyPlayers) and mediator (research psychologist at MyPlayers) were part of the MyPlayers organisation. Their concern for the privacy of and protection against exploitation of the players, made it clear to the players that their identities would not be revealed. Their main goal was to promote the well-being of the players and they did not have a power relationship with the players.

There may have been concerns about completing a sensitive and lengthy questionnaire. However, the quantitative questionnaire was developed in such a way that players should not have taken more than 20 minutes to complete it. The participants received the questionnaire electronically and did not have to travel anywhere to complete it. The answers to some of the questions may have been experienced by some participants as sensitive and they may have felt exposed and anxious. They were repeatedly ensured that no data that could identify them would be shared with the management of MyPlayers or their coaches. This addressed the possible risk of a lack in anonymity. The participants also had a choice whether to be interviewed and be further exposed to more detailed questioning.

In light of the fact that the main focus was on mental health, and that it could have been a sensitive issue for the rugby players as they could have felt exposed, an emotional burden was possible. However, the participants were continually assured that no identifiable data would be made known to anyone that may lead to a possible threat concerning their position as professional rugby players. They also had access to psychological support if needed. Existing infrastructure with regard to confidential support already exists within the MyPlayers organisation.

Although there were no direct benefits for the rugby players, they will have the opportunity to undergo the programme after completion of the study – if it comes into being and permission is granted by management. The outcome of the study will also provide valuable information on the mental health of professional South African rugby players that has not yet been available in South Africa. This in turn, will put support mechanisms in place for the rugby players. By addressing mental health issues of professional rugby players, there may be indirect benefits for their families as well, for example improved relationships between players and family members.

No costs were involved for the participants and no remuneration was given.

Both hard and electronic copies of data are stored by the researcher. Electronic copies of the transcripts are also stored on the computer of the researcher. Hard copies will be stored in the archive of the COMPRES research entity in the faculty on the Potchefstroom Campus, and electronic copies on the password-protected computer of the researcher, statistician and promotors. Data will be destroyed by professional services after five years of being archived. The participants gave permission for the data to be used in future studies that may build on this study.

Results will be disseminated in the form of published articles. A report will also be given to SARPA/MyPlayers with an additional verbal feedback discussion session of the results. Additionally, a more informal letter with outcomes of the study will be emailed to MyPlayers for them to make the research findings available to the rugby players.

Structure of the Thesis

The article format thesis will be followed, as described by the A-rules of the North-West University with the following layout:

- Background and literature orientation of the study (Section A)
- Articles (Section B)
- Layout of draft programme (Section C)
- Critical reflection (Section D)
- Appendices (Section E)

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SECTION B

ARTICLE 1

Prevalence of common mental disorders and its relationship with mental toughness in professional South African rugby players

Abstract

A high prevalence of common mental disorders exists amongst international professional rugby players. In South Africa, no study has yet been conducted on the prevalence of common mental disorders amongst professional rugby players or rugby players. Moreover, athletes should be guided to build on their awareness of mental health in order to take action with regard to dealing with common mental disorders. If athletes do not show an awareness of mental toughness, it can be difficult to address common mental disorders. This article focuses on the prevalence of common mental disorders amongst professional South African rugby players, and the relationship between common mental disorders and mental toughness. A survey design was used by administering a questionnaire. The inclusion criteria were professional rugby players, able to communicate in English. The results indicated that in general, players portray significant mental toughness (M = 5.69) on a 7-point scale. On average, most players experience sound sleep (M = 3.54) where 1 represents the lowest obtainable score and 5 the highest. Anxiety/depression and distress measured the lowest (M = 1.65) of all the common mental disorders measured in this study. The anxiety/depression positive[2] items (last 6 items) measured

[2] In this context, "positive" refers to the last six questions in the questionnaire on anxiety/depression that were formulated in a positive manner, for example *Have you recently felt that you were playing a useful part in things?*

higher (M = 1.88) than the first six anxiety/depression items (M = 1.65). Furthermore, the results indicated a positive relationship between mental toughness and sound sleep (r=0.262). Negative relationships were found between mental toughness and all other common mental disorders with the highest relationship being with anxiety/depression positive[2] (r=-0.423). Other significant relationships were found with anxiety/depression (r=-0.401), distress (r=-0.259) and common mental disorders problems in general (r=-0.220). The results indicated that the management of teams needs to look at specific aspects, such as alcohol consumption amongst players, the implications of alcohol use on performance, but also on mental well-being in general.

Keywords:

Common mental disorders, rugby players, mental toughness, professional athletes

Introduction

Common mental disorders (CMDs) refer to depressive and anxiety disorders (Patel & Kleinman, 2003). These disorders are classified in the ICD-10 as "neurotic, stress-related and somatoform disorders" and "mood disorders". For the purpose of this article, the specific description of common mental disorders by Gouttebarge, Kerkhoffs, and Lambert (2016) is used. They describe it as "symptoms of distress, anxiety, depression or substance abuse/dependence" (p. 595). These authors go further by referring to research done by Bültman, Kant, and Kasl (2002) and Verhaak, Hoeymans, Garssen, and Westert (2005), who indicated a high prevalence of CMDs in general and specific occupational populations. In a study carried out by by Gouttebarge, Backx, Aoki, and Kerkhoffs (2015) with professional football players across five European countries, it was found that in three of the countries both life events and career dissatisfaction were associated with CMDs. These authors suggested a multidisciplinary

approach to address the need for self-awareness in professional football. Another study concluded that the number of severe musculoskeletal injuries and surgeries amongst European professional football players can be positively correlated with symptoms of CDMs (Gouttebarge, Aoki, Ekstrand, Verhagen, & Kerkhoffs, 2016). Gouttebarge, Aoki, and Kerkhoffs (2015) also found a high prevalence of CMDs amongst international professional football players.

In South Africa, no study has yet been conducted on the prevalence of CMDs amongst professional rugby players or rugby players. This article forms part of an initial study, which has been identified for South Africa, involving professional rugby players who are the focus of this article. A further focus of this study was to discuss the relationship between CMDs and the mental toughness (MT) of rugby players.

According to a review done on MT by Connaughton, Hanton, Jones, and Wadey (2008), various understandings exist of what MT exactly is, varying from a personal trait to a defence mechanism. According to Jones, Hanton, and Connaughton (2002), mental toughness is:

> *... having the natural or developed psychological edge that enables you to: generally, cope better than your opponents with the many demands (competition, training, lifestyle) that sport places on a performer; specifically, be more consistent and better than your opponents in remaining determined, focused, confident, and in control under pressure* (p. 209).

Gucciardi, Hanton, Gordon, Mallet, and Temby (2015) define MT as a unidimensional concept, which plays an important role in performance, thriving and goal progress – irrespective of the presence of stress. However, irrespective of its definition, it is internationally well known that MT contributes to sport performance (Connaughton, Hanton, & Jones, 2010; Crust & Clough, 2011; Gucciardi, Gordon, & Dimmock, 2008) and has been found to be a prerequisite in

competitive sports (Gucciardi, 2017) and a key ingredient of success (Owusu-Sekyere & Gervis, 2016). A study done by Cowden (2016) on competitive tennis players refers to a positive association between self-awareness, specifically self-insight, and MT. Self-awareness or self-insight alone is, however, not enough. Athletes should be guided to build on their awareness in order to take action with regard to dealing with CMDs. If athletes do not have an awareness of MT, it can be difficult to address CMDs. The current article highlights this relationship between MT and CMDs. Once this prevalence and relationship are known, the goal is to develop a mental health support programme for the players, which would hopefully address challenges and assist players with improved performance.

The following questions were asked:

- What is the prevalence of CMDs amongst professional South African rugby players?
- What is the relationship between CMDs and MT?

Methods

Design and participants. A cross-sectional survey design, which is viewed as an appropriate design to obtain data regarding typical behaviour (Welman, Kruger, & Mitchell, 2005), was used in the form of a questionnaire. This design was appropriate for this study, as the researcher wanted to obtain information about the behaviour of professional South African rugby players with regard to common mental disorders. The inclusion criteria focused on being professional rugby players and able to communicate in English. The questionnaire was adapted from already existing instruments that were used in a set combination (questionnaire) in a study with retired international professional rugby union players by Gouttebarge et al. (2016). Permission to use the questionnaire in the aforementioned study was granted by the authors. The

adapted questionnaire for this study was constructed on Google Docs available to each participant by means of the link provided on the consent form. Responses were received anonymously. The participants had to respond to specific questions and/or statements on CMDs and MT. From the 940 registered players, a purposive sample of 215 professional South African rugby players responded and gave consent for their data to be used. Although the response rate seemed poor, it was viewed as a typical response to questionnaires and was expected of a group of professional people with hectic schedules.

Measuring instruments. As mentioned before, the various subscales below have been grouped together from different questionnaires.

- **Distress:** Distress during the four weeks prior to answering the questionnaire was measured, using the Distress Screener, based on the Four-dimensional Symptom Questionnaire (4DSQ). This questionnaire has been validated in different languages, including English (test-retest coefficients ≥ 0.89; criterion-related validity: Area Under Receiver Operating Characteristic (ROC) Curve ≥ 0.79) (Braam et al., 2009; Terluin et al., 2006). Scores between 1 (no), 2 or 3 (regular or very often) can be obtained on each of the three items with scores of 2 or 3 indicating the presence of distress. The alpha coefficient for the subscale was 0.74 (see Table 1 below) and was, therefore, accepted as reliable. An acceptable alpha coefficient, according to Tavakol and Dennick (2011), is between 0.70 and 0.95, although ideally it should not be higher than 0.90.
- **Anxiety/depression:** Anxiety/depression during the four weeks prior to completing the questionnaire was measured. The 12-item General Health Questionnaire (GHQ-12) was used and has been validated in English (criterion-related validity: sensitivity ≥ 0.70, specificity ≥ 0.75, Area Under ROC Curve ≥ 0.83) (Goldberg et al., 1997). Twelve items were presented. The first six questions were formulated with scales from 1 (not at all) to 4 (much more than usual). The alpha coefficient

for the items was 0.84 (see Table 1 below). The last six questions were formulated in a positive manner with scales from 1 (better as usual) to 4 (much less than usual). The alpha coefficient for the items was 0.88 (see Table 1 below).

- **Sleep disturbances:** Sleep disturbances during the four weeks prior to answering the questionnaire were measured. Four questions were asked from the Patient Reported Outcomes Measurement Information System (PROMIS) (Yu et al., 2011), based on a 5-point scale varying from 1 (not at all) to 5 (very much). A score of 2 and more indicates the presence of a sleep disturbance. The questionnaire has been validated in English (construct validity: product-moment correlations ≥ 0.96. The alpha coefficient for the items was 0.81 (see Table 1 below).
- **Adverse alcohol behaviour:** The 3-item Alcohol Use Disorders Identification Test (AUDIT-C) was used to measure current levels of alcohol consumption. This test has been validated in English (criterion-related validity: Area Under ROC Curve 0.70 – 0.97) (Dawson et al., 2005; De Meneses-Gaya, Waldo Zuardi, Loureiro, & Crippa, 2009). Cronbach's Alpha was not applicable, as these items were discussed seperately.
- **Smoking:** *A* single question was asked where the participants had to answer either yes or no.
- **Mental toughness:** The Mental Toughness Index (Gucciardi, Hanton, Gordon, Mallett, & Temby, 2015) was used. The 8-item scale is rated on a 7-point scale from 1 (always false) to 7 (always true). The initial validation study (i.e., Guccardi et al., 2015) and subsequent studies (e.g., Gucciardi, Zhang, Ponnusamy, Si, & Stenling, 2016) have found construct validity support for the instrument, along with evidence of convergent and incremental validity. Appropriate internal consistency ($\alpha = .79$), composite reliability ($\rho = .86$ to .89), and omega coefficients ($\omega = .82$ to .89) have been demonstrated for the measurements taken during several athlete studies (Gucciardi et al., 2015; Gucciardi et al., 2016; Mahoney, Gucciardi,

Ntoumanis, & Mallet, 2014). The alpha coefficient for the items was 0.93 (see Table 1 below).

Procedure. Permission was obtained from the South African Rugby Union (SARU) who administers professional rugby players in South Africa, and the MyPlayers organisation where all professional rugby players in South Africa must be registered. MyPlayers is primarily responsible for improving the lives and general welfare of professional South African rugby players by looking after their interests, such as commercial, industrial, brand and communication, financial, and player career development aspects. Furthermore, ethical clearance was obtained from the North-West University, Potchefstroom Campus, under the number: NWU-00359-16-A1.

The link to the informed consent form and questionnaire was sent to the rugby players by means of an email by a MyPlayers mediator. Interested players needed to read the informed consent form and then by clicking on the submit button on the questionnaire, they gave consent for their data to be used. The questionnaire was made available in English. The participants were asked to complete the questionnaire within a week. However, this process took substantially longer due to the full schedules of the players. The completed questionnaires were automatically saved on a secure electronic server that only the researcher have access to.

Statistical Methods. The data analysis for the quantitative research was based on SPSS Version 24 statistical programme. Statistical Services at the North-West University, Potchefstroom Campus, assisted with the quantitative data management. In order to determine the suitability of the quantitative data, preliminary analyses (internal consistency, normality, homogeneity of variance) were performed to determine whether the measures and data were

appropriate for parametric analyses. Bivariate analyses were also completed between each of the stressors and the mental health variables (Spearman's rank correlations).

Results

Data from the table below indicated the prevalence of CMDs amongst the 215 participants who completed the questionnaire.

Table 1:
Prevalence of CMDs

Item	Reliability	Minimum	Maximum	Mean	Std. Deviation
Sound sleep	0.81	1.2	5.00	3.54	0.93
Anxiety/depression	0.84	1.00	4.00	1.65	0.60
Anxiety/depression positive	0.88	1.00	4.00	1.88	0.67
Distress	0.74	1.00	3.00	1.65	0.54
Mental Toughness Index	0.93	1.13	7.00	5.69	1.04

Table 1 indicates that in general, the players portray significant mental toughness (M = 5.69), where 1 represents the lowest obtainable score and 7 the highest. On average, most of the players experience sound sleep (M = 3.54) where 1 represents the lowest obtainable score and 5 the highest. Anxiety/depression and distress measured the lowest (M = 1.65) of all the CMDs. The anxiety/depression positive items (last 6 items) measured higher (M = 1.88) than the first six anxiety/depression items (M = 1.65). With regard to alcohol consumption, 57% of the players indicated that they have less than four alcoholic drinks a day and 74% of the players indicated that they consume two or less drinks per day. Most of the players (83.9%) indicated that they

have more than six alcoholic drinks on one occasion, once a month or less frquently. Although the avarage scores of all the CMDs seems to be good, one must rather focus on the percentage of players who do experience problems with symptoms of CMDs.

In order to determine when symptoms of CMDs could become a problem to palyers, the following classification was used:

Table 2:
Symptoms of CMDs Converted into Problems

Distress	A score of 1 to 2 received 0; a score of 2 to 3 (regular or often) received 1
Sound sleep	A score of 1 to 2 (not at all or a little) received 1; all other scores received 0
Anxiety/depression	A score of 3 to 4 (more than usual) received 1; all other scores received 0
Mental Toughness Index	A score of 1 to 3 (false) received 1; all other scores received 0
How often do you have a drink?	More than 4 times a month received a 1; all other scores received 0
How many drinks (standard glass)?	More than four drinks a day received 1; all other scores received 0
How often do you have six or more?	Four times a month or more received 1; all other scores received 0
Smoking	Smoking received 1; non-smoking received 0

Table 3 below shows that the most pressing problem that the players are experiencing, is a problem with alcohol (47.9%) where a player has experienced at least one of the three alcohol problems. Other problems that feature are distress (16.3%), sleep disturbances (7%), together

with anxiety and depression (4.2%). Smoking is indicated as a problem for 4.7% of the players, meaning that 4.7% of the players smoke.

Table 3
Prevalence of Problems

Problem	Frequency	Percentage
Distress	35	16.3%
Sleep	15	7%
Anxiety-depression	9	4.2%
Smoke	10	4.7%
Alcohol	103	47.9%

From these problems stated, a total number of problems that the sample of rugby players experienced, were calculated (see Table 4).

Table 4
Total Number of Problems Rugby Players experienced

Number of problems	Number of Players	Percentage
0	0	40.9%
1	789	41.4%
2	24	11.2%
3	14	6.5%

Table 4 indicates that 40.9% of the players experienced no problems. 89 players (41.4%) experiences one problem, 24 players (11.2%) experienced two problems and 14 players (6.5%) experienced 3 players. None of the players experienced more than three problems.

In order to illustrate relationships between above-mentioned problems and MT, Table 5 highlights a positive relationship between MT and sound sleep (r=0.262). It was, therefore, inferred that sound sleep improves MT. Negative relationships (the lower the problem, the higher MT) were found between MT and all other CMDs with anxiety/depression positive (r=-0.423) as the highest relationship. Other significant relationships were anxiety/depression (r=-0.401), distress (r=-0.259) and the number of CMD problems experienced (r=-0.220).

Table 5
Spearman's Rank Correlation of Prevalence of Problems with Mental Toughness

Item	Mental toughness
How often do you have a drink containing alcohol?	-0.060
How many drinks (standard glass) containing alcohol do you have on a typical day?	0.023
How often do you have six or more drinks (standard glass) containing alcohol on one occasion?	-0.087
Sound sleep	0.262*
Anxiety/depression	-0.401*
Anxiety/depression positive	-0.423*
Distress	-0.259*
Smoke problem	-0.103
Number of problems	-0.220*

*$p<0.05$

Discussion

The results indicated a presence of CMDs amongst the sample of South African professional rugby players even though most of the players show significant MT. Even though approximately half of the players did not indicate any presence of CMDs, there are players who indicated that they experience problems with being distressed, depressed/anxious, experiencing sleeping disturbances and/or problems with alcohol use. Ultimately, these problems can have a debilitating effect on the performance of players and the outcome of matches (Rice, Purcell, De Silva, Mawren, McGorry, & Parker, 2016). However, it is important to interpret the study results according to how specific CMD symptoms were converted into specific problems, as indicated in Table 2. When the conversions were done, it was taken into consideration that players need to be at peak performance during every match.

International studies indicate that anxiety, depression and distress are common amongst athletes (Keaney, Kilding, Merien, & Dulson, 2018; Kilic et al., 2017; Walker, Thatcher, & Lavallee, 2007; Walsh, Gleeson, & Shepard, 2011). In a recent study with elite athletes in the United Kingdom, a significant percentage of the sample of the athletes showed signs of anxiety/depression (Foskett & Longstaff, 2018). In the current study, the prevalence of 4.2% for anxiety and depression is very similar to the 2015 findings of the World Health Organization (2017) that indicated a 4.4% prevalence for the global population and 9% for the African region. Similarly, a 3.6% prevalence was measured for anxiety disorders, with 10% for the African region. However, if compared to a study done by Patel and Kleinman (2003) on the prevalence of CMDs in general, the results from the current study seemed significantly lower than their results, indicating a prevalence of 20% to 30% amongst participants in 11 studies from countries in Africa, Asia, and Latin America. It is, however, important to bear in mind that due to a rugby team consisting of only seven to fifteen players, if one of the players experiences a CMD, it may

have an unfavourable impact on the performance of the team as a unit. Although not many studies have focused on CMDs amongst professional rugby players, and no studies have been conducted in South Africa in this regard, there are limited international studies available with similar findings concerning the presence of CMDs amongst rugby players. In a study with retired professional rugby union players by Gouttebarge et al. (2016), it was found that 25% of the players suffered from distress, 28% from anxiety/depression, 29% experienced sleeping disturbances, and 24% suffered from adverse alcohol behaviour. Another study by Gouttebarge et al. (2016) indicated a higher prevalence of CMDs amongst professional rugby players than amidst other professional athletes. Comparing to the current study, it seems as if the presence of CMDs amongst professional rugby players is evident and a real challenge that needs to be addressed.

The percentages provided in Table 3 clearly indicate that the biggest problem rugby players have to overcome, is the use of alcohol. Almost half (47.9%) of the players indicated some sort of excessive alcohol use. According to a study conducted by Prentice, Stannard, and Barnes (2015) with club rugby union players, heavy episodic alcohol consumption, associated with reduced sleep, contributes to lower body power output the morning after a drinking session. Unfortunately, measures were not indicated on anaerobic performance. A study by Lecoultre and Schultz (2009) with trained cyclists also indicated a negative performance influence after low to moderate alcohol use.

The relatively high alcoholic consumption of the players, indicates that the tendency to use alcohol is higher than one would expect in a professional sport environment. This tendency, however, is not uncommon, as was evident from the results in a study done by Martens, Dams-O'Connor, and Beck (2006) where it was revealed that higher levels of alcohol consumption are associated with higher sport performance levels. This is alarming, especially in light of a study

conducted by Karnincic, Cavala, and Roguli (2018) who found that none of the participants (handball players) who were tested for alcohol consumption by making use of the Alcohol Use Disorders Identification Test (AUDIT), measured on the low risk scale. The participants either measured as hazardous drinkers (33.77%), harmful drinkers (34.44%) or probable dependence (31.79%). In a study by Du Preez et al. (2017), it was found that elite rugby league players in Australia showed hazardous levels of alcohol use during pre-season (68.6%), and in-season (62.8%). In the current study, more players indicated excessive alcohol use during a specific occasion (more than six drinks) than having three or more drinks per day. This tendency elicits questions that can be explored in follow-up studies, for example, what stressors lead to excessive drinking behaviour during specific occasions or what the social influences are that lead to excessive drinking behaviour of professional rugby players during specific occasions.

Findings by Turrisi, Mastroleo, Mallet, Larimer, and Kilmer (2007) indicated that student athletes engage in more episodic drinking than their non-athlete peers. A South African study (Surujlal, Nolan, & Ubane, 2012) highlighted the tendency of male athletes to consume high quantities of alcohol during specific occasions. Similar to the study by Gouttebarge et al. (2016), it was not specified whether these drinking habits occurred during team socials. In light of the fact that many of the players are still in their twenties, it is not uncommon that they are prone to excessive drinking habits. In a study by Taylor, Ward, and Hardin (2017), it was found that male student athletes are at risk for problematic alcohol consumption. This problematic alcohol consumption may relate to stress relief with regard to sports participation (Nelson & Wechsler, 2001). The aforementioned findings are somewhat concerning. In a competitive environment like professional rugby, it is important that on each of the match days all 23 players are able to perform optimally. If one player drinks excessively during one occasion before a match, for example, it can have a negative impact on the game and end results. This poses an additional

question whether players have an understanding of basic sports physiology and the impact of excessive use of alcohol on aspects such as soft tissue injuries, general recovery, the quality of sleep, energy management and ultimately, performance. If there is an awareness present and a better understanding of the impact of alcohol use, possible pull factors, such as excessive alcohol use as a social coping and releasing mechanism, may be seriously re-considered by the players. However, from the data it was also evident that a specific social culture exists relating to expectations of how players should behave socially, such as taking part in excessive alcohol use during social gatherings. Such aspects are important to consider if this dilemma is to be understood and addressed.

Only a small percentage of the players indicated that they smoke. This small percentage of smokers amongst professional athletes correlates with research on smoking habits where it was found that smoking amongst athletes measures lower in comparison with the general population (Alaranta et al., 2006). This may be due to the awareness of athletes that smoking influences physical health (Karnincic et al., 2018).

Even though only 3.3% of the players indicated that they do not view themselves as being MT, this should be earmarked as a major concern, especially in light of its negative relationship with CMDs. According to Gucciardi, Hanton, and Fleming (2017), MT may represent a positive indicator of MH. It is, therefore, important to pay attention to the MT of players, as it plays an important role in success (Zeiger & Zeiger, 2018). Cowden (2016) conducted a study on MT and tennis, and found that MT may contribute to successful tennis performance and in a study with adolescent volleyball players, the research of Raudsepp and Vink (2018) indicated a positive association between MT and sport-specific practice. It is globally recognised that MT contributes to success in sport (Connaughton et al., 2008) and serves as a catalyst in maintaining emotional, behavioural and cognitive control (Jones, Hanton, & Connaughton, 2007). In view of the

literature emphasising the importance of MT in a sport environment, the MT of professional South African rugby players must receive continual attention and be highlighted as a top priority.

Limitations and recommendations. In light of the discussion above, and before a conclusion is given, the limitations of the study with regard to the process and results are mentioned. Specific recommendations are also made. A limitation of the instruments used can be that the self-reporting did not occur in response to a clinical instrument in which case a more valid diagnostic tool would be offered to a given pathology, as was evident in research done by Gouttebarge et al. (2016). However, the aim of this study was not to offer a specific clinical diagnosis with regard to rugby players, but to merely determine symptoms and the prevalence of of CMDs. Another limitation with regard to the measuring instrument was the lack of a comprehensive and coherent instrument that has been standardised under South African conditions instead of having to make use of various subscales.

A bigger randomised sample would have been preferred, as only 22% of the total population of professional rugby players in South Africa participated in the study. The study also did not specify whether participants indicated alcohol use within a team setting or as individuals away from their team. The nature of their alcohol use may add valuable information in order to understand the circumstances that may lead to the use of excessive alcohol by rugby players. This may be an interesting topic for future research. As indicated in this article, very little research has been conducted with professional South African rugby players. An in-depth insight into the nature of their circumstances would, therefore, make a valuable contribution to the overall well-being of players.

Lastly, it could be asked whether the 16 participants who participated in the Skype interviews could in anyway have been biased. The researcher did not have any control over the selection of these participants, as they all volunteered out of their own free will. However,

looking at their responses, possible bias was not dedected, as responses were well balanced on the coninuum of criticism.

Implications. In light of already existing literature, this study did not reveal unexpected results in terms of global findings. However, it is an important study, as it is the first of its kind with South African professional rugby players that will allow for the development of a specific mental health support programme to address the unique challenges that players experience. The results indicated that the management of teams need to look at specific aspects, such as alcohol consumption amongst players, the implications of alcohol use on performance, but also on mental well-being in general. Even though the percentages for anxiety/depression seem relatively low in relation to general populations, it is important to address these aspects, and the presence of distress amongst the players. Management should consider addressing CMD issues on a continual basis by making it a part of the general training programmes of players to provide them with a solid base of mental health support.

The first step towards well-being is awareness. The players should be made aware of the importance of well-being and how crucial it is to address CMDs. They should further receive ongoing MT training. Most importantly, management must show that they value the well-being of their players and that they will support players in this regard. This commitment of both management and players will lead to a positive impact, not only on individual well-being, but also on different sports teams and South African rugby in general.

Conclusion

In conclusion, the results showed that professional South African rugby players experience CMDs, making this an area that must be addressed. The negative relationship between CMDs and MT also indicates that MT is an area of importance that needs to be

addressed. High alcohol consumption measured the highest amongst the CMDs with distress as the second contender. Although anxiety/depression does not seem to be significantly high, these aspects should not be underestimated as anxiety/depression may have a detrimental effect on individuals, the performance of teams. The players seem to measure themselves high with regard to MT, which is a positive starting point when working with CMDs.

The study in general makes a valuable contribution to the game of rugby in South Africa. As mentioned in the introduction, it forms part of a bigger study and will hopefully contribute to a mental health support programme that is in its development phase.

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SECTION B

ARTICLE 2

The experiences of professional South African rugby players with regard to stressors and mental health

It is not uncommon for professional athletes to experience stressors. Professional rugby players may, therefore, also experience stressors related to circumstances in their personal lives, and their on-field performance. These stressors may have a detrimental impact on their professional performance. The objective of this article was, therefore, to explore and describe the stressors that professional South African rugby players experience. Once these stressors are known, a support programme can be developed to manage or ameliorate these stressors and in turn, the improvement of on-field performance can be facilitated. A qualitative interpretive descriptive design was followed with semi-structured Skype interviews conducted with 16 professional South African male rugby players. The findings showed that the players experience on-field and off-field stressors, which reciprocally influence each other and the mental health of the players. The stressors reported mainly include the pressure to perform, obtaining and maintaining professional contracts, team selection, injuries, personal circumstances, and identity-related and common mental disorder-related issues. The players mainly deal with these stressors by means of cognitive coping strategies, including cognitive and physical preparation, and support of family and friends. The implication of this study is the identification of a definite need of these players to be supported with regard to their mental health.

Keywords: common mental disorders; mental health; professional rugby players; South Africa; stressors

Introduction

This article forms part of a larger mixed methods study which aimed to develop a framework for a mental health support programme for professional South African rugby players. The initial online questionnaire completed by 215 players indicated that some of the players are experiencing common mental disorders (CMDs). More specifically, 47.9% of the players are experiencing problems with alcohol, 16.3% are experiencing distress, 7% sleep disturbances and 4.2% anxiety and depression. For the purpose of this article, CMDs are defined according to two main diagnostic categories – depressive disorders and anxiety disorders – as indicated by Patel and Kleinman (2003) and the World Health Organization (WHO, 2017). The latter states that these disorders are described as "common", because of their high prevalence in the general population. These disorders also impact on the mood of individuals diagnosed with these conditions. Semi-structured interviews were then conducted to determine possible stressors that professional rugby players are experiencing linked to CMDs. Players were also asked about coping mechanisms, current support mechanisms and aspects that they would like to include in a support programme. This article focuses on the qualitative section of the study, with a specific emphasis on the stressors players experience, how these stressors influence their mental health and how these players attempt to enhance their mental health both on and off the field.

It is evident that mental health has an impact on the performance of rugby players. According to a study by Rice et al. (2016), elite athletes are exposed to a high prevalence of mental disorders, such as anxiety and depression. In the modern professional era, participation in rugby union is physically and mentally demanding on the players (Roberts, Trewartha, Higgit, El-Abd, & Stokes, 2008). It is, therefore, not uncommon for professional athletes to experience stressors (Nicholls, Backhouse, Polman, & McKenna, 2009; Schaal et al., 2011). According to Nicholls, Jones, Polman, and Borkoles (2009), the most reported stressors indicated by research

include injuries, mental challenges and physical challenges. Rugby players are, however, not only experiencing stressors, which may be connected to circumstances relating to their on-field performance (competitive stressors), but also to their personal lives (non-competitive stressors). In their study on stressors experienced by injured athletes, Evans, Wadey, Hanton, & Mitchell (2012) found that athletes experience sport-related stressors (e.g., internal pressure and external pressure; missed opportunities), medical/physical-related stressors (e.g., loss of fitness; delay in treatment), social stressors (e.g., isolation; social comparison) and lastly, financial stressors (e.g., cost of rehabilitation; inability to work).

As mentioned earlier, some stressors are related to CMDs. In a study conducted on stressors and CMDs, Gouttebarge, Haruhito, Verhagen, and Kerkhoffs (2017) found that professional footballers who experience stressors due to conflict with their coach, recent adverse life events, or career dissatisfaction are more likely to report CMD symptoms. In an Australian study on depression, anxiety and alcohol use, Du Preez et al. (2017) further found that rugby league players show a lower prevalence for depression, but a higher prevalence for general anxiety disorders and alcohol misuse than the general population. In a South African study, Gouttebarge, Kerkhoffs, and Lambert (2016) found in a population of retired professional South African rugby players that they experience a prevalence of distress (25%), anxiety/depression (25%), sleeping disturbances (29%), adverse alcohol behaviour (24%), smoking (15%) and adverse nutrition behaviour (62%). These findings appear to be in line with previous research (Hale & Collins, 2002) that rugby players experience a combination of psychological factors, which may also affect their rugby performance. Such factors or stressors may further contribute to burnout syndrome, as was found in a South African study done by Grobbelaar, Malan, Steyn, and Ellis (2010), where it was found that overtraining as a stressor may lead to burnout syndrome. Lindsay, Lewis, Scarrott, Draper, and Gieseg (2015) similarly found that high

intensity running and impacts, associated with rugby, may cause psychophysiological stress. The intensive training professional rugby players undergo may lead to injuries, which are a major concern for players, as injuries may lead to contracts not being renewed, or much worse, careers may be terminated. Injuries are further of special concern as high performance rugby has one of the highest injury rates amongst all sports (Williams, Trewartha, Kemp, & Stokes, 2013).

It is evident from the above discussion that rugby players potentially experience a vast range of stressors that may have a detrimental impact on their on-field performance. It was, therefore, the objective of this article to explore and describe the stressors that professional South African rugby players experience that can be related to CMDs. It was envisioned that once these stressors were known, a support programme can be developed to facilitate improved on-field performance. In this process, the overall well-being of the rugby players was also addressed, as stressors also have an impact on their personal lives. No studies on the effect of stressors on the personal lives of professional rugby players in South Africa could be found.

Methodology

Research design and method. As described by Thorne (2008), a qualitative approach with an interpretive descriptive design was followed. This design seemed appropriate, as it allowed the researcher to not only explore, but to analyse data more comprehensively to allow for an in-depth understanding of the stressors that the players experience. According to Botma, Greeff, Mulaudzi, and Wright (2010), semi-structured interviews allow for a detailed picture of a particular topic. Obtaining such detail was indeed possible when semi-structured Skype interviews were utilised and the researcher was able to obtain specific information with regard to stressors by asking several formulated open-ended questions, followed by probes and additional questions.

The interview schedule consisted of the following questions relevant to stressors:

- What would you view as issues/situations that are stressors in the lives of professional rugby players?
- What stressors do you personally experience as a professional rugby player?
- How do these stressors impact your mental health?
- What do you do to enhance your personal mental health?
- What do you do to enhance your psychological on-field performance?

Data analysis. A thematic qualitative data analysis was done by the researcher and a co-coder by means of an interpretive descriptive analysis (Thorne, 2008). According to Thorne, an interpretive descriptive analysis allows researchers to make sense of the relationships between various groupings. In this case, four focus areas that were identified from the themes, relating to the interview questions. Answers from the five questions asked during the Skype interviews were integrated into four focus areas presented in four tables, as described in the results section of this article. By reviewing the coding of the data, sub-themes and themes were identified, which the researcher could naturally link to the interview questions. The first two questions both focused on current stressors, the third one on the impact of these stressors, and the last two on the enhancement of mental health. However, seeing that no South African literature was available on the influence of stressors on the personal lives of the players, the researcher decided to keep the last two questions separate in light of their importance.

Participants. Sixteen players agreed to participate in the semi-structured Skype interviews to obtain more in-depth information regarding the mental health questionnaire completed by 215 players. Players had to be current, male professional South African rugby players from any race and had to be able to communicate in English. Recruitment was done with the assistance of a gatekeeper and mediator at the MyPlayers organisation, the official organisation of professional

rugby players in South Africa. MyPlayers are responsible for looking after players from a commercial, financial, industrial, development and well-being perspective. The players who completed the questionnaire and who were willing to participate in a Skype interview, provided their Skype address on the completed questionnaires. The players also provided their cell phone numbers via the mediator in order for the researcher to communicate a date and time for the interview. The participants all preferred visual Skype interviews. There were, however, interviews that were conducted verbally only due to a bad Internet connection. The interviews all lasted approximately 35 minutes. The participants were made aware of the fact that if at any stage they felt uncomfortable, the interview would immediately be terminated. The participants also had access to support services within the structure of MyPlayers if they felt overwhelmed due to suffering from possible CMDs. None of the participants indicated any signs of discomfort during the interviews. On the contrary, all the participants were positive and participated with ease.

Ethics

The participants voluntarily participated in the study and had to sign an informed consent form that ensured confidentiality and anonymity. No names were indicated on the transcriptions to ensure anonymity. The transcriptions, recordings and data are securely kept in the archives of the research entity. The research was approved by the Health Research Ethics Committee (HREC) of the Faculty of Health Sciences, North-West University (Potchefstroom Campus): NWU-00359-16-A1.

Results

The results of the data are provided in Tables 1 to 4 below. Table 1 indicates the stressors that players are currently experiencing, either personally or through the experiences of team

members. Although two separate interview questions were asked with regard to current stressors, namely what do rugby players experience in general and what do players experience personally, similar answers were given for both questions. These answers were, therefore, integrated in Table 1. Table 2 focuses on the impact of these stressors on the mental health of the players. Tables 3 and 4, respectively, focus on how players can improve both their personal and their on-field mental health.

In Table 1, two broad themes are evident that were identified from the data. The first theme emphasised the stressors that players experience with regard to their actual on-field performance. Three subthemes were identified as part of this theme: The players indicated that they are under immense pressure to perform; they experience stressors related to contract renewals, and team selection and injuries are two of the major stressors in their lives. All three subthemes were found to be interrelated and form the basis of expectations relating to the performance of the players.

The second theme that emerged focuses on the players as individuals. Although the subthemes relate indirectly to performance, these aspects focused more on the experiences of players as individuals with personal needs. Four subthemes were identified as part of this theme: It must be acknowledged that players have different personal circumstances; the players are in need of support; the players experience identity-related issues; and the players experience CMD-related issues.

Table 1
Current Stressors Experienced by Professional South African Rugby Players

Themes	Subthemes	Code description	Direct quotes
Players as performers	The pressure to perform	• Players experience a constant fear of failure and non-accomplishment. • Players have a constant awareness of the pressure to perform, which may lead to performance anxiety. • Players put their health at risk to perform even if they are injured. • Players experience conscious and non-conscious pressure from management, families, friends, and team members. • High level rugby comes with high level pressure.	"… when you are in a system where the standards are measured daily, … it is difficult." P1 "Fear for failure. Can be motivator but only up to a point." P5 "I have to practice harder, play better." P9 "In a way also same stressors like getting selected and performance …" P10 "High expectations." P11 "… many times aspect that you do not have control over like coach who does not like you." P16
	Contracts and team selection	• Not making the team, means you are not good enough. • Not receiving a contract, means there is no income. • Concurrent stress due to contract renewals. • Length of contracts is problematic.	"When contract comes to end it causes stress." P7 "Coaches can be dishonest and lie to players and causes stress." P7 "Not selected, some take it seriously – see it as semi attack to them personally." P8 "Selection, sitting on bench. When is my next contract and what will happen after that . . ." P12

Themes	Subthemes	Code description	Direct quotes
		• Relationships with coaches can be affected. • Uncertainties cause stress.	"What management thinks of us is stressful cause worry about contract … only have one-year contract." P14 "Uncertainties – uncertain world – injuries, team selections." P15
	Injuries	• Injuries cause players to jeopardise their health. • Injuries can end the careers of players. • Injuries influence confidence and performance.	"… the biggest stress when I experience is when I get injured, because it is the last thing that any player want but at the end of the day you cannot run away from it. Its part and parcel, but it is quite stressful when it does happen." P2 "Injuries is quite a big thing to get over." P3 "Injuries can cause stress if you do not know how to handle it." P7 "Injuries are stressful because you do not get a contract again." P9 "When player loses confidence due to injuries … can't run away from it but stressful." P11 "Injuries makes it hard to come back on same level again." Injury jeopardised me to get increase because I could not play some of the important games." P13
The individual behind the performance	Personal circumstances	• Cultural backgrounds.	"… when new guys come in and take your place." P3

Themes	Subthemes	Code description	Direct quotes
		• Rugby takes priority over personal lives. • Personal circumstances influence performance. • Depend on rugby financially. • Having something else to depend on. • Age issues. • Younger players can be experienced as a threat. • Age becomes an enemy of the players.	"What is life after rugby if they take my place, because I am older." P3 "… to play in team when still young. To make the team is stressful. If not picked mind told me I am not good enough." P4 "… but if there are stressors it is difficult to concentrate on field." P5 "Schedules are very different from wife. Weekends wife works and I am at home or I am gone whole weekend." P6 "… sole breadwinner in family so they have lot of pressure to perform. Not selected – it affects a lot of people." P8 "Sacrifices: more Afrikaans, so I have to adapt my lifestyle to fit in." P14
	In need of support	• Life after rugby is uncertain. • A rugby career is short. • Support within the rugby environment can be lacking. • Lack of support with regard to personal circumstances.	"… not always someone to help you with home issues." P4 "… but do not enable players to deal with stressors off field – relationships, paying the bills." P5 "If you do not have something else to fall back on if your career ends, like studies or other job." P6

Themes	Subthemes	Code description	Direct quotes
			"What happens after rugby? Especially for young rugby players who have nothing to fall back unto." P10
			"What will happen after career is over?" P12
			"Biggest stressors are also life after rugby." P15
	Identity-related issues	• Image is important to the players. • Identity configuration makes it difficult to talk about issues. • Expectations of others cause struggles within the self. • Identity configuration causes fear of failure.	"Players do not talk because of ego in sport environment. Guys do not easily talk to one another regarding mental health." P5
			"Players are too proud to talk to someone else and sometimes it becomes too late when they start talking." P6
			"Individuals deal with it differently." P7
			"So I have to perform." P8
			"Especially for young rugby players who have nothing to fall back unto." P10
			"… background as well – e.g. family stress about you." P13
			"Seek approval and want to be in position where I am accepted and then feel good about myself. I have to drink which I would normally not do." P14

Themes	Subthemes	Code description	Direct quotes
	CMD-related issues	• Depression becomes a reality. • Uncertainty of how to handle stressors. • Influence of off-field stressors. • Performance anxiety.	"Stressors at home can influence performance on field." P4 "… performance anxiety was most damaging." P5 "… guys did not get contracts – some were depressed." P6 "If you do not have form or play good ,it influences mental health." P7 "When player loses confidence due to injuries …" P11

In Table 2, two themes are evident. Stressors have a detrimental impact on the players, on the field and/or off the field. However, there were also players who indicated that stressors influence their ability to perform optimally on-field. No stressors were, however, identified that significantly influence off-field activities. Two subthemes were identified under theme one: Firstly, it became clear that both on-field and off-field stressors reciprocally affect one another, and ultimately, have an impact on the performance of players (and probably also on the CMDs of players). Secondly, the stressors contribute to mental health issues. One subtheme was identified under theme two, namely that stressors motivate players to perform better on-field.

Table 2
Influences of Stressors on the Players

Themes	Sub-themes	Code description	Direct quotes
Detrimental influences	Reciprocal relationship between on-field and off-field stressors	• Relational issues have negative influences. • Problems in relationships cause uncertainty. • On-field stressors negatively influence off-field aspects and mental health. • Puts stress on marriage. • On-field responsibilities negatively impact their private life. • Influences judgement. • Impacts on family and friends. • Acts out of character. • Unhappy on-field = unhappy off-field. • Causes uncertainty. • Off-field stressors influence on-field performance.	"Stressors at home can influence performance on field." P4 "… but sometimes it stays on my mind when I am away. Sometimes opposition and the way things are done administratively, it affects me on field." P6 "If not happy on field I am unhappy off field. It is quite stressful especially if you have family. Individuals deal with it differently – I bite nails, become quiet, irritated and that goes over to personal life as well. Become irritated with wife, friends, family because of personal uncertainty of future." P7 "Had issues with friends that did not work out and affected my rugby [off-field] … stressors would influence game." P8 "Maybe you get new contract away from friends and family." P12 "There are always something at back of your mind, very difficult to me – always thinking of off-field stressors – like a shadow. Can forget about it for a while, but it always comes back." P15

Themes	Sub-themes	Code description	Direct quotes
	Stressors contribute to mental health issues	• Players become unrealistic with regard to their performance. • Players develop different mental health issues.	"… physically it is draining, that is the first sign of … you scroll back you thought you have done extra work when you actually have done less, left a lot of the time." P1 "… because we have been uhmm almost criticised by every aspect being negative, there is always going to be that fear of failure and there is always going to be that fear of non-accomplishment. You can't accomplish." P1 "It does impact on your momentum, and your rhythm and continuity so that is the most stressful part about it." P2 "… got serious injury and I had to fall back a bit and think of different things. Was not as good as before and had to get mind strong to get into game again." P3 "On-field performance influence how I think about self and how others think about me. I have to work on how I think about myself." P4 "… fear of failure would put stress on self and marriage – become not nice person to deal with. I am generally happy but can become irrational if stressors." P5 "The players feel the pressure – big stress factor for me regarding mental health cause it steals your happiness and causes stress." P7 "My mental health has huge impact on people in my life. I have lot of stressors." P11 "Have to perform and avoid serious injury – so thinking about that all time." P12

Themes	Sub-themes	Code description	Direct quotes
Optimal influences	Stressors motivate players to perform better	• Stressors bring out best performance.	"Now I use stressor to motivate me … just use negative energy and put into game positively." P8 "It brings out the best in me at the moment – I have to be better, be the best." P9 "Subconscious it may have effect. But as soon as warm up, I forget about stuff off the field. I don't think about other things." P10

For the purpose of this study, "personal mental health" refers to the mental health of players when they are not on the field, even though it can relate to their on-field performance. In Table 3, two themes are evident, namely external motivation and internal motivation – how the players improve their personal mental health. The players indicated that, although rugby plays an important role in their lives, they also need to distance themselves from the game at times in order to maintain a healthy off-field mental health. The players do, however, not only turn to either external motivation or internal motivation, but rely on both types of motivation. With the first theme relating to external motivation two subthemes emerged, namely that the players do not only focus on rugby, but also on other activities in order to deal with the stressors relating to the game of rugby. The second subtheme was that the players also turn to other people for support and guidance to enhance their personal mental health. A second theme that emerged indicated that internal motivation includes cognitive strategies the players use to resolve problems and to enhance their mental health.

However, there was also an indication that the players find it difficult sometimes to control cognitive aspects, which means negative intrusive thoughts about rugby and related performance expectations.

Table 3
How Players Enhance Their Personal Off-field Mental Health

Themes	Subthemes	Code description	Direct quotes
External motivation to improve mental health	Players do not only focus on rugby	• Study and career preparation. • Additional physical activities provide balance. • Keeping rugby and personal lives separate. • Players focus on physical activities to enhance mental health.	"I focus very much on studies at the moment, continuously to almost keep my thoughts off from rugby." P1 "I do something on the side, something physically challenging." P1 "Don't mix rugby with personal life. Also keep busy – wife and friends. Play golf or something." P7 "… like to get balance, like go for a run, gym, work – coping is physical." P10 "Life is bigger than my job. Have beautiful family. Everything is not rugby. Separate the two." P11 "Have hobbies that help me keep mind off stressors … try and be busy or do something else. Keep physically busy." P15 Got degree for life after rugby. Do job shadowing on off days …" P16

Themes	Subthemes	Code description	Direct quotes
	Players turn to other people for support	• Relationships are important for sharing. • Close family and friends play key role in support.	"… also surrounding myself with people who are quite positive and that will bring positive influence into me." P2 "Would talk to significant people in my life." P3 "Still get support from family and friends when lose so I realise that it does not matter." P5 "Parents taught me to talk through issues …" P6 "I focus on how to sort out problem, and share with my wife." P8 "Team mates are my support – they are on similar boat, I am not alone. Team mates back me, also my family." P11 "Friendship with other teammates, especially when living together. They there to assist even if you do get injured. Family is very supportive." P12 "I will go speak to someone I am comfortable with and who will be interested in me." P14 "Good support from wife and daughter." P16
Internal motivation to enhance mental health	Some players find it difficult to not continually focus on rugby and expectations thereof	• Rugby as a career consumes time. • Mental work is more difficult than physical aspects.	"… it is difficult, you can't really avoid something that is fulltime your job." P1

Themes	Subthemes	Code description	Direct quotes
			"Most stressful part is injury. In mind I think I have worked so hard, done all work and injury is disappointing …" P11 "Hard to cope if injury because you need to perform. I struggle most of the time to get it together …" P13
	Players resolve their problems on a cognitive level to improve their mental health	• Internal motivation plays an important role in maintaining mental health. • Players cognitively build on previous experiences. • They focus on the future with a positive attitude. There are multiple options available to improve mental health. • Stay positively oriented. • Focus on external factors for motivation.	"I think first of all is to think back and to realise what I have done so far and eh when I look back I realise how much work I have put in and I think that makes a big difference in a me … know I got the capabilities to, to be good enough to do anything I put my mind to it." P2 "I kept diary … had to work more mentally than physically regarding how I will make comeback." P3 "I have to work on how I think about myself." P4 "I think back to what have done so far – how much work I have put in, it helps picking me up." P11

When compared to the themes in the previous table, it is again evident in Table 4 that players make use of internal and external motivation to improve their on-field mental health. Internal motivation was divided into two subthemes, namely how players cognitively resolve problems to

improve their mental health, and players view their physical preparation as important in improving their mental health (including the support players receive from family and friends with regard to on-field mental health improvement).

Table 4
How Players Enhance Their Psychological On-field Performance

Themes	Subthemes	Code description	Direct quotes
Internal motivation to improve on-field mental health	Players resolve their problems on a cognitive level to improve their mental health	• External factors make positive thinking essential. • Experiencing the game as fun. • In advance preparation becomes important. • Staying in the moment is essential. • Players separate game from private life. • Some players find it difficult to improve their mental health on-field. • The game itself enhances mental health.	"I think for me it's actually the easiest, because I obviously think back of what I have done in those weeks preparation and I know that I have done enough preparations … I have to keep believing that I can produce and do whatever I set my mind to it …" P2 "Self-talk, but much more relaxed. When I am anxious I pace and talk a lot with self …" P5 "On game – a lot has to do before the game and how I prepare myself – 80 minutes and I must focus." P6 "I concentrate on game when I am on field – keep mind of personal life when playing." P7 "But as soon as warm up, I forget about stuff off the field. I don't think about other things." P10 "Get in right mind set, stay focus on the goal. Stay with moment and not worry about win or lose. Don't stress so much on won and lose – moment." P12 "… immediately on field I forget about rather on the

Themes	Subthemes	Code description	Direct quotes
			everything. I just focus on game." P13
	Physical preparation is important	• Rituals are important. • Physical preparation enhances mental readiness.	"… so the week for me building up to the game becomes very important and I do my preparations properly." P2 "Know specific rituals or techniques." P6 "Always the butterflies, but the last few games I only tried to be myself. Enjoy practice because you are just yourself and it goes well – also try to do it during a match …" P9 "… takes a lot of practice, get more confident on field." P12 "… want to perform and do well for people close to you. You part of team and how you play will compliment team." P14 "… get stuff that works for you – routine … the more comfortable in routine, the better I perform on same level every time. Kind of auto-pilot, need to get what works for you and adapt as needed." P16
External motivation to improve on-field mental health	Support from family and friends help with on-field mental health improvement		"Would talk to significant people in my life." P3 "Team mates are my support – they are on similar boat, I am not alone. Team mates back me, also my family." P11 "I will go speak to someone I am comfortable with and who will be interested in me. There are mates in team I can relate to." P14

Discussion

It is clear from the results that different themes and subthemes emerged from the data and are discussed in this section. Firstly, current stressors that players are experiencing were identified. A major stressor that emerged was the fact that this cohort of professional South African rugby players constantly experience pressure to perform – from management, family members, friends, supporters, or internal pressure. It is also evident that the pressure is experienced consciously and subconsciously. This pressure is highlighted by Henderson, Harries, Poulos, Fransen, and Coutts (2018) when they mention the necessity of constant physiological readiness and psychological arousal of players for optimal performance. This constant awareness of the pressure to perform often leads to performance anxiety, as they may harbour a constant fear of failure and non-accomplishment if they do not perform well. The anxiety to perform may in turn have a detrimental effect on their on-field performance, as demonstrated by a study done by Campo et al. (2015), who found that the experience of high levels of anxiety is commonly associated with poor on-field performance.

Players receive temporary contracts, usually not longer than one to three years in length. Once players obtained a contract, further pressure manifests in the form of team selection, as the latter can be a determinant of whether a contract will be renewed or not. In most instances, if players are not selected for a team on a regular basis, it can mean they are viewed as not good enough by the current coaching staff, which in turn affect their ability to secure a new contract. If they are not offered a new contract by their current union and they are not approached by another union, it can mean the end of their career, which affects their immediate source of income. These uncertainties often turn pressure into stress for these players and are a reality that needs attention.

According to a study done by Gabbett (2002) on the physiological characteristics of players during team selection, it was found that players who have been injured previously, are

not easily selected again. If this pattern continues for an extended period of time, it may evidently have an influence on possible contract renewal. As a result, injuries are also viewed as a major stressor amongst most players. According to King, Clark, Kellmann, and Hume (2017), injuries cause general stress and sport-specific stress. Similar to team selection, injuries may determine whether a contract will be renewed or not. If players become a risk to the team due to constant unavailability, chances are that they will not be offered a new contract – team members are paid by the team, and when they cannot perform, they are not paid (offered a contract). Injuries may, therefore, have an influence on the confidence and performance of players. Injured players may even put their own health at risk by under reporting the severity of an injury (e.g., a concussion) out of fear to be excluded from a team due to non-selection over the course of a season. Professional rugby players play high level rugby that comes with a high price. They must perform on a continual basis, they push themselves constantly and this pressure may cause injuries – ending the rugby career of players. Stress amongst professional players with regard to injuries is indeed relevant. According to Cruz-Ferreira, Cruz-Ferreira, Ribeiro, Santiago, and Taborda-Barata (2018), union rugby has one of the highest injury rates when it comes to team sports.

As indicated above, players have to be on-field performers, but behind these performers are also individuals with a life outside of rugby. Players have personal circumstances that are unique, and these circumstances may play a role in their on-field performance. Players have different cultural backgrounds and the results indicated that they may, in some cases, need to repress some of their cultural beliefs in order to be accepted into a team. It appears that rugby often takes priority over their personal lives as being a professional player demands a high level of commitment from individuals. Simultaneously, their personal circumstances may influence their on-field performance (when players go through a difficult time in their marriage). Rugby is

typically a game for younger players in their 20s and younger players may, therefore, at times be viewed as a threat to the careers of older players, especially if players do not have anything else to fall back on for financial survival following the end of their professional career. Van Reenen (2012) is of the opinion that younger players typically start their career at the age of 19 and players in their late 20s up to their middle 30s can be viewed as old within the context of professional rugby. However, younger players may also experience stress when selected for a team, as they in turn may feel that they have to prove themselves worthy of being part of the team. As a result, younger players tend to peak with regard to competitiveness, but they also peak with regard to the onset of mental disorders (Gulliver, Griffiths, & Christensen, 2012).

The results showed that the players are in dire need of support, especially in light of the short lifespan of a rugby career, which may end in their middle to late 30s. The players may experience that support within the rugby environment is lacking, also in light of life after rugby. There is also a need for support with regard to personal challenges. Some players experience identity-related issues, for example, when it becomes difficult for players to talk about emotional or mental health-related issues, because of the culture they have been brought up in – when their culture proclaims that a real man does not talk or have to talk about challenges. Image is often important to the players and they often feel that they have to live up to a certain image that is created in this respect, either by them, management, family members, friends and/or supporters. They would, for example, drink with the team as part of acceptance, even though they do not like having a drink. This image may also be linked to a cultural identity, which may impact on team cohesion and performance (Kuroda, Palmer, & Nakazawa, 2017). The way in which what may be referred to as a "macho-self" has developed, often makes it difficult for the players to acknowledge their need for support. Furthermore, expectations of others cause conflict within the self-image of players as they may want support from others, but simultaneously fear that it

may be viewed as a weakness. This image of being independent and mentally tough, has become a part of many of these players and is causing a fear of failure if they do not live up to it and in turn, can trigger ordinary pressure into performance stress. According to Mangan (2013), the image of masculinity is closely linked to the desired role of a warrior and hero that is strongly portrayed in the promotion of rugby unions in South Africa. Integrated into this role is the exaggerated insistence on aggression, as it is defined as a prominent characteristic of heroism.

According to the results, CMD-related issues are not uncommon amongst the players, even though it is difficult to admit this. In an Australian study, it was found that 10.1% of the rugby league players who participated in a study on depression, anxiety and alcohol misuse reported hazardous levels of alcohol use in-season (Du Preez et al., 2017). Depression may also become a reality and performance anxiety may become an unwanted consequence, as players may be uncertain of how to manage their stressors. Furthermore, the presence of off-field stressors leading to CMDs was also evident.

It is clear from this study that stressors have a major influence on the players and their environment, on-field and off-field. The players indicated that the influences of stressors can range from being optimal to detrimental. However, general stressors can be more detrimental than improving performance. Detrimental influences may contribute to stressors in the reciprocal relationship between on-field performance and off-field circumstances. The stressors cause uncertainties on and off the field and also create tension within relationships. In this regard, the stressors experienced within relationships off-field, may have a detrimental impact on on-field performance. Similarly, on-field stressors may have a negative impact on relationships off the field. It is, therefore, evident that players are experiencing significant pressure both on and off the field (Deas & Linde, 2013). According to Rice et al. (2016), it is not uncommon for elite athletes, like union rugby players, to be vulnerable to various mental health problems, which can

relate to aspects both on and off the field. On the optimal side, players may experience certain stressors as motivators to perform better. This level of motivation is, however, only relevant to on-field performance and not to off-field circumstances.

The results indicated that players have learned to deal with stressors by improving their mental health on the field and off the field (personally). Off the field, the players tend to make use of either external or internal aiding factors to improve their mental health. The players improve their mental health externally by not only focusing on the game of rugby, thereby distracting themselves. They indicated that there are multiple options available for improving their mental health and the players try to stay positive.

Some of the players are preparing for a career outside of rugby by means of tertiary studies. They also try to maintain a balance by participating in additional physical activities. The players indicated that it is important to them to keep rugby and their personal lives separate as a way of managing their stressors. Furthermore, the players may turn to others (such as close family members and friends) for support to improve their personal mental health, as relationships are important to them with regard to sharing emotional and personal issues.

The players appear to improve their internal off-field mental health by resolving their issues on a cognitive level. Players would think about challenges and what they should do to overcome these obstacles in their lives. Internal aiding factors play an important role in maintaining mental health. The players cognitively build on previous experiences by reflecting on what has worked in the past, and they focus on the future with a positive mindset. However, the players find it difficult to not focus exclusively on rugby and the expectations surrounding the game. Rugby is viewed as a full-time career and often consumes most of their time. The players also tend to feel that it is more difficult to work with the cognitive aspects of the game than with the physical aspects. They find it easier to physically prepare for a game, as there may

not be so many distractions involved than preparing themselves mentally – they may need to set aside current issues that they experience in their family or marriage.

From the above discussion, it is clear that professional South African rugby players experience a range of different stressors and that these stressors have an influence on their performance. While it is important for these players to perform on-field, it is also important to prioritise their overall well-being. According to Anderson, Miles, Mahoney and Robinson (2002) and Vealey (2007), players must be approached holistically with regard to their well-being with on-field performance only being a part of their well-being. A holistic approach can enhance on-field performance. Simply put, mentally healthy individuals are better performers.

Practical implication

The findings of the study strongly suggest that the next logical step would be to develop a mental health support programme for professional South African rugby players. As with most professional sports currently, the rugby union is a multi-million rand industry and the careers and livelihoods of a myriad of individuals depend on the practical and commercial success of the sport. Whether it is at provincial, multi-national or international level, it is of the utmost importance for players to be able to function optimally – from a health, well-being and performance perspective. The commercial and performance value of such a support programme can, therefore, not be over-emphasised. The findings of the study clearly emphasise the need of players for a support programme. It is crucial that a support system is created – easily accessible – to assist the players in becoming healthier individuals to ensure optimal performance. Currently, the English Rugby Players Association (RPA) model in conjunction with the Rugby Football Union (RFU) and a private sector partner, set the standard for making mental health and health-related support available to elite professional rugby players. This proposed mental health

programme is, therefore, an ideal opportunity to implement a similar programme, especially in light of the programme being based on scientific results obtained from professional South African rugby players.

Conclusion

Professional South African rugby players experience a range of stressors, which can have an influence on their on-field performance, and on their personal lives off the field. The pressure to perform, injuries and contract renewal all contribute to a general awareness by the players that the pressure to perform is high. Stressors also come in the form of personal circumstances, lack of support, identity-related issues and CMD-related issues.

The identified stressors can have a direct or indirect influence on the on-field performance and off-field challenges of the players, emphasising a reciprocal relationship between the two. The players deal with these stressors by improving their mental health both on the field and in their personal lives by means of internal and external aiding factors. However, some of the players find it difficult, and it is evident that a mental health support programme will definitely benefit not only the players, but also their families, management and the game of rugby in South Africa. Furthermore, mentally healthy players tend to perform better on the field.

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SECTION B

ARTICLE 3

The relationship between stressors and common mental disorders experienced by professional South African rugby players

Abstract

Objective: The objective of the study was to explain the relationship between stressors and common mental disorders, as experienced by professional South African rugby players.

Methods: A sequential mixed methods approach was followed with a survey design (quantitative strand) and a qualitative descriptive design (qualitative strand). Professional male South African rugby players (N=215) completed an online mental health questionnaire after which 16 players provided informed consent to participate in semi-structured Skype interviews. A quantitative analysis was done by making use of SPSS software for the quantitative data. A qualitative approach was followed by making use of an interpretive descriptive data analysis as a method to make sense of the qualitative data.

Results: Some of the players experience stressors that relate to common mental disorders. In turn, these stressors influence their on-field performance and off-field functioning. The players further showed internal and external skills to improve their mental health. They indicated a lack of support with regard to mental health support and a definite need for a mental health support programme designed for professional rugby players within a South African context.

Keywords:

Common mental disorders, mental health, mixed methods research, professional rugby players, rugby, South African rugby players, stressors

Introduction

The governance of global mental health is in dire need of improvement, as there is a growing awareness of how important mental health is for global health (Cratsley & Mackey, 2018). The importance of mental health is emphasised by Singaraju (2018) who states that it forms an essential component of health. This author also refers to the World Health Organisation (WHO) who underlines the importance of mental health, as not merely the absence of a disease but comprehensively refers to physical, mental and social well-being. Within professional sport it is also not uncommon for athletes to experience mental health difficulties, especially depression and anxiety disorders – often referred to as common mental disorders (CMDs) (Foskett & Longstaff, 2018). According to Elbe and Jensen (2016) together with Nixdorf, Frank and Beckmann (2016), the prevalence of diagnosable psychiatric disorders amongst athletes varies between 4% and 68%. Foskett and Longstaff (2018) further found that 47.8% of 143 elite athletes in the United Kingdom show signs of anxiety/depression and 26.8% show signs of psychological distress. In another study by Beable, Fulcher, Lee and Hamilton (2017) on depression amongst elite athletes from various sports, it was found that depression occurs frequently with 215 of the athletes meeting the criteria for moderate symptoms of depression. Most studies indicate a similar severity of psychiatric symptoms between athletes and non-athletes or even a higher severity for athletes (Gorczynski, Coyle, & Gibson, 2017; Gulliver, Griffiths, Mackinnon, Batterham, & Stanimirovic, 2015; Rice et al., 2016).

Despite the importance of mental health being evident and acknowledged. Mental health is still stigmatised and, therefore, not openly spoken about within the elite sport environment, especially amongst male elite athletes. According to Soghoyan and Gasparyan (2018), stigmatisation may reduce the well-being of individuals who suffer from mental illness as it may cause them not to seek help. Athletes may, therefore, experience a barrier when seeking help for

mental health challenges due to the stigma associated with mental health (Breslin et al., 2018; Etzel & Watson, 2007; Hughes & Leavey, 2012). This barrier may be directly linked to mental health being viewed as a form of "weakness", especially in the elite sport environment. According to Putukian (2015), this resistance to seek treatment is commonly linked to the view that seeking counselling indicates a "weakness". This barrier to seek help may be problematic for elite athletes and, in the case of this study, especially for elite South African rugby players, as they may experience mental health problems affecting both their on-field performance and off-field functioning and relationships.

It is not unknown for elite athletes in various team sports to experience stressors that are linked to mental health problems, as they are constantly exposed to various stressors (Keaney, Kilding, Merien, & Dulson, 2018). Gulliver, Griffiths, and Chrisenisen (2012) found that these athletes experience unique stressors and in competitive sport, especially at elite level, athletes may experience significant stress (Kremer, Moran, Walker, and Craig, 2012). Arnold and Fletcher (2012) has identified more than 600 different stressors that elite athletes are exposed to that make them susceptible to CMD.

When participating at an elite level in sport, especially rugby, the mental and physical demands on players are tremendous. Physical demands due to high-speed collusion sports (Evans et al., 2015) may lead to injuries, which in turn may cause stress that can lead to CMDs (Gulliver et al., 2015). According to Madžar, Milošević, Hrabač, and Heningsberg (2017), injuries pose a significant problem to elite athletes. They found that amongst professional soccer players more than 16% of injuries are serious, which may lead to an inability to participate for more than four weeks. In a rugby environment, serious injuries that render players unable to participate for a prolonged period may also result in them not being selected again for a team or their contracts are not renewed. In a study on musculoskeletal injuries, Gouttebarge, Aoki, Ekstrand, Verhagen,

and Kerkhoffs (2016) found that professional footballers who suffer from severe injuries reported symptoms of CMDs two to four times more that players who do not suffer from these types of injuries. Gulliver et al. (2015) also found that injured Australian elite athletes from national sporting organisations show higher symptoms of depression and general anxiety than their non-injured peers. From the above discussion it is, therefore, clear that a problem exists regarding stressors and CMDs amongst professional athletes and that injured players are particularly at risk in this regard (cf. Madžar et al., 2017). Articles focusing on stressors and CMDs amongst active South African rugby players were not found.

Enhancing knowledge amongst rugby players concerning stressors and CMDs can diminish or contribute to the elimination of the stigma attached to it and assist players in seeking help when needed. Breslin et al. (2018) found that an increased knowledge about mental health motivates athletes to engage with and support others with mental health problems. As such, the problem formulation guided the researcher to formulate the following research question for the present study: What are the experiences of professional South African rugby union players regarding stressors and mental health?

Methods

A mixed methods approach (see Figure 1) was followed, specifically the explanatory sequential mixed methods design, as described by Creswell and Plano Clark (2011):

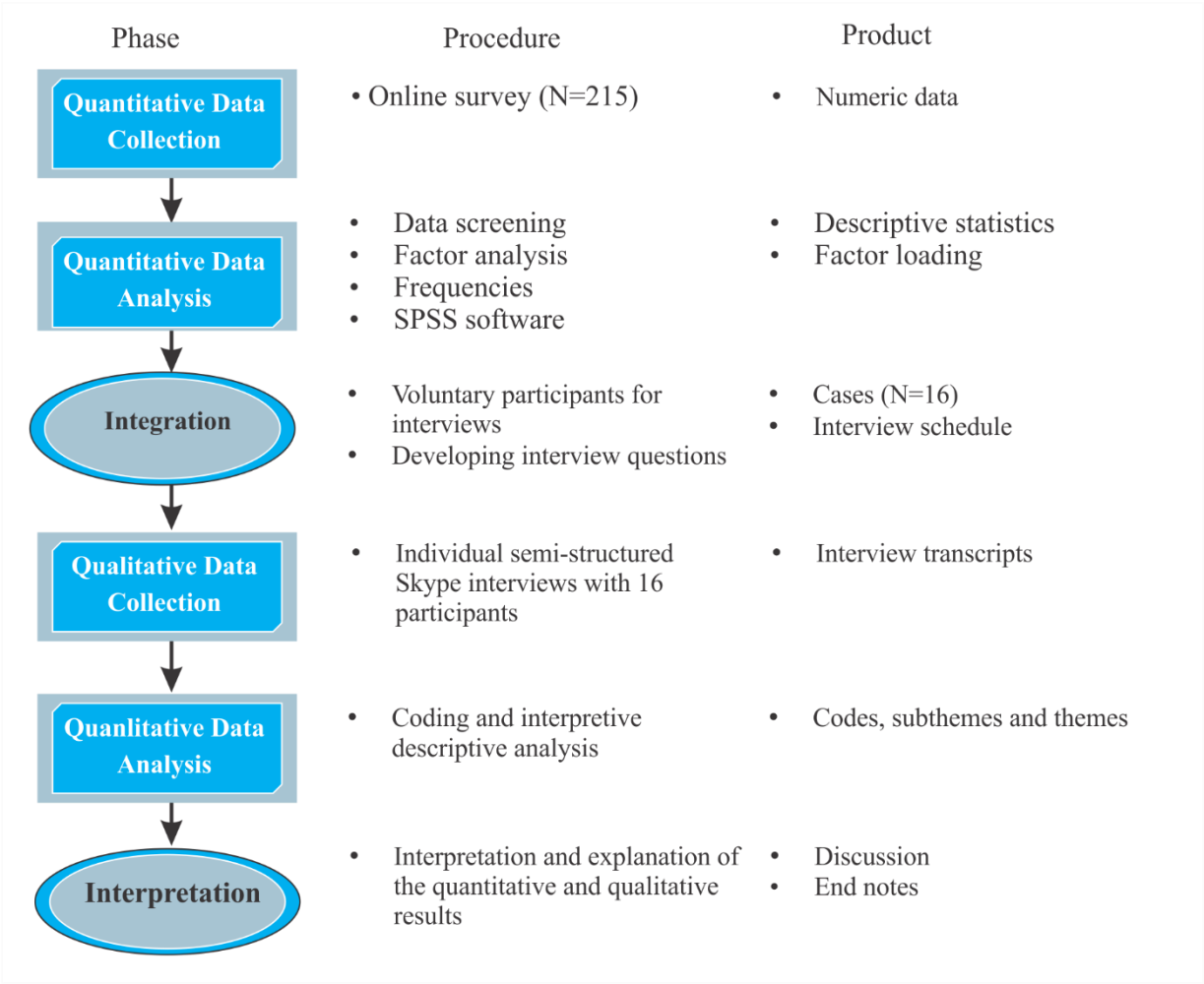

Figure 1: Diagram of Mixed Methods Sequential Design

The quantitative strand consisted of a survey design with an online mental health questionnaire completed by 215 professional South African rugby players. Given that there were approximately 950 professionally contracted rugby players in South Africa at that time, this sample size was considered to be sufficiently representative of the total population as it represents approximately 23% of the total population. The participants were all male and current elite South African players at the time of the study. The online questionnaire consisted of a combination of subscales from validated questionnaires, as previously used by Gouttebarge, Kerkhoffs, and Lambert (2016) on retired professional South African rugby players. These

authors gave permission for the questionnaire to be used in this study. They have previously administered their questionnaires on elite South African rugby players in an international study on retired professional rugby union players. The following instruments were subsequently used to determine the prevalence of CMDs:

- **Distress:** The Distress Screener (three items) was based on the Four-dimensional Symptom Questionnaire (4DSQ). This questionnaire has been validated in English (test-retest coefficients ≥ 0.89; criterion-related validity: Area Under Receiver Operating Characteristic (ROC) Curve ≥ 0.79) (Braam et al., 2009; Terluin et al., 2006). Scores between 1 (no), 2 or 3 (regular or very often) can be obtained on each of the three items with scores of 2 or 3 indicating the presence of distress.
- **Anxiety/Depression:** The 12-item General Health Questionnaire (GHQ-12) (six items) has been validated in English (criterion-related validity: sensitivity ≥ 0.70, specificity ≥ 0.75, Area Under ROC Curve ≥ 0.83) (Goldberg et al., 1997). Twelve items were presented. The first six questions were formulated with scales from 1 (not at all) to 4 (much more than usual).
- **Sleeping disturbances:** Patient Reported Outcomes Measurement Information System (PROMIS) (two items) (Yu et al., 2011). This questionnaire has been validated in English (construct validity: product-moment correlations ≥ 0.96). Four questions were asked from the Patient Reported Outcomes Measurement Information System (PROMIS) (Yu et al., 2011), based on a 5-point scale varying from 1 (not at all) to 5 (very much). A score of 2 and more indicates the presence of a sleep disturbance.
- **Adverse alcohol behaviour:** Alcohol Use Disorders Identification test (AUDIT-C) (three items) has been validated in English (criterion-related validity: Area Under ROC Curve 0.70 – 0.97) (Dawson et al, 2005; De Meneses-gaya, Waldo Zuardi, Loreiro, & Crippa, 2009).

- **Smoking:** *A* single question was asked: Do you smoke? (Either a "yes" or "no" was needed as the response).

The qualitative strand consisted of an interpretive descriptive design, as described by Thorne (2008). Semi-structured Skype interviews were conducted with 16 professional South African rugby players who indicated on their questionnaire that the researcher may contact them for potential follow-up interviews. The interviews were conducted as a sequel to the quantitative questionnaire in order to obtain more detailed information on the prevalence of CMDs. Although the results from the quantitative questionnaires indicated that professional South African rugby players suffer from CMDs, the researcher wanted to ascertain how the players experience mental health and CMDs. He also wanted to obtain more information on possible stressors that may be contributing to CMDs not explored by the questionnaire, current support mechanisms, and suggestions by players regarding what should be included in a mental health support programme designed for elite South African rugby players. The researcher thought it best to obtain this information through personal interviews – an excellent tool to obtain rich information through a structured questionnaire.

Data analysis

The analysis of the quantitative data was done by means of SPSS statistics software. The Statistical Services of the North-West University, Potchefstroom Campus, assisted with the quantitative data management. In order to determine the suitability of the quantitative data, preliminary analyses (internal consistency, normality, and homogeneity of variance) were performed to determine whether the measures and data were appropriate for non-parametric analyses. Bivariate analyses were completed between each of the stressors and the mental health variables (Spearman's rank correlations).

Sleep disturbance was measured by means of four items ($\alpha = 0.814$) while anxiety/depression was measured by six items ($\alpha = 0.837$). Anxiety/depression positive had six items = ($\alpha = 0.882$) and distress had three items ($\alpha = 0.742$). An interpretive descriptive analysis (Thorne, 2008), that refines and explains the statistical results of quantitative data, was utilised by the researcher and a co-coder for the qualitative strand. Bias was addressed by keeping to the guidelines of an interpretive descriptive analyais and by consulting with an independent co-coder.

Ethical Considerations

The participants voluntarily took part in the study and had to sign an informed consent form. Confidentiality and anonymity were also ensured on the form. The participants were made aware of the availability of counseling support within the structure of MyPlayers if the need arose as a direct result of the interviews. None of the players became upset during the interviews. The research was also approved by the Health Research Ethics Committee (HREC) of the Faculty of Health Sciences, North-West University: NWU-00359-16-A1.

Results

Quantitative results

Table 1 below shows that the most pressing CMD problem that the players are experiencing is a problem related to alcohol misuse/abuse, reported by almost half (47.9%) of the participants. Other problems that featured to a lesser degree, included distress (16.3%), sleep disturbances (7%) together with and anxiety and depression (4.2%). Furthermore, 4.7% of the players also indicated that they are smokers. Although most of the measurements seem relatively low, it is important to bear in mind that these results were obtained from what many would

regard as a high-functioning population, as they are all professional athletes. Even if one team player experiences stress or suffers from a CMD at the elite level where the margins between success and failure is extremely small, this may have a detrimental impact on the overall performance of his team.

Table 1:
Prevalenced of CMD Problems

Distress Problem					
		Frequency	**Percentage**	**Valid Percentage**	**Cumulative Percentage**
Valid	.00	179	83.3	83.6	83.6
	1.00	35	16.3	16.4	100.0
	Total	214	99.5	100.0	
Missing	System	1	0.5		
Total		215	100.0		
Sleep Problem					
		Frequency	**Percentage**	**Valid Percentage**	**Cumulative Percentage**
Valid	.00	200	93.0	93.0	93.0
	1.00	15	7.0	7.0	100.0
	Total	215	100.0	100.0	
Anxiety and Depression Problem					
		Frequency	**Percentage**	**Valid Percentage**	**Cumulative Percentage**
Valid	.00	206	95.8	95.8	95.8
	1.00	9	4.2	4.2	100.0

	Total	215	100.0	100.0	

Smoke Problem

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	205	95.3	95.3	95.3
	1.00	10	4.7	4.7	100.0
	Total	215	100.0	100.0	

Alcohol Problem

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	.00	112	52.1	52.1	52.1
	1.00	103	47.9	47.9	100.0
	Total	215	100.0	100.0	

Qualitative results

From the quantitative data it was evident that the participants experience CMDs. However, it was important for the researcher to explore in more detail the dynamics behind the CMDs, and for this purpose qualitative semi-structured interviews were conducted with 16 of the respondents who provided consent to be interviewed. During the interviews the researcher aimed to gain an understanding of certain areas of their professional careers, namely: how the players understand mental health; the current stressors (if any) experienced by them; how these stressors influence their mental health (if at all); how the players improve their mental health both on and off the field; the current available support mechanisms that they have access to; if they are aware

of these mechanisms available to them; and what they would like to include in a mental health support programme designed for elite South African rugby players.

Integration

The above-mentioned qualitative themes, together with the subthemes and quantitative results, are provided in Table 2 below as a joint display (Creswell & Plano Clark, 2011) – a characteristic of mixed methods research. True to mixed methods research, the integration of the qualitative and quantitative strands must be evident. In explanatory sequential research, integration occurs when the qualitative results explain the quantitative results (Creswell, 2015).

In Table 2, the first two columns indicate the statistical measurements obtained in the quantitative strand. The data showed that the players experience problems regarding alcohol misuse/abuse in particular, followed by difficulties related to distress, sleep, anxiety/depression and smoking. The next three columns show results that explain in more detail how certain stressors can be linked to CMDs, how these stressors influence the players, how players attempt to deal with stressors to improve their mental health, how players experience current support mechanisms available to them, and finally what their expectations are of what should be included in a mental health support programme designed for elite South African rugby players. In the final column, the quantitative and qualitative results are interpreted, providing the proverbial “bigger picture” of the relationship between stressors and mental health.

Table 2:
Joint Display of Quantitative (QUAN) and Qualitative (QUAL) Results

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
Alcohol Distress Sleep Anxiety/ depression Smoke	**Alcohol** (more than four drinks per month) M=1.79 SD=0.79 **Alcohol** (more than six drinks per occasion) M=1.79 SD=0.79 **Alcohol** (three or more drinks per day) M=1.45 SD=0.87	South African professional rugby players view mental health issues as a reality.	Mental health is linked to stressors in the past, present and future.	"… if people can wake up and you are not stressed about what's to come." P1 "… it means how mentally tough a person is … in terms of handling the pressures that comes with the intensity … with playing at the top level …" P2 "Biggest stressors are also life after rugby." P15	The players have indicated in the questionnaire that they suffer from CMDs. The qualitative data explained the presence of CMDs by means of stressors experienced by the players, and specifically how these stressors do not only influence their on-field performance, but also their off-field functioning. However, the qualitative data assisted the researcher to gain a more in-depth understanding of how players are able to improve their on-field performance and off-field functioning. Lastly, in light of the quantitative data, the players have indicated qualitatively what current
			Mental health centres on a mental focus.	"You can train mind to be strong and develop …" P3 "Upstairs [mentally] you make right decisions and then comes physical mental first." P4	
			Personality plays a role in mental health.	"… you are pretty happy with what you have become or you are very confident in that phase …" P1	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
	Problem=47.9% Distress (items=3), α =0.742M=1.65 SD=0.54 Problem=16.4% **Sleep** (items=4) α=0.814 M=3.54 SD=0.93 Problem=7% Anxiety/ Depression positive (items=6) α=0.882 M=1.88			"To be happy, confident in ability and what you do as player and not let factors influencing it." P7	mental health support mechanisms are in place and what they would like to see in a mental health support programme.
		Mental health issues are neglected or ignored.	Although mental health has an important role to play in rugby, it is underplayed.	"There is stigma around mental health and we need to take stance against it … in SA we have big problem with male ego, also when it comes to mental health." P5 "Not enough emphasis on mental health for rugby players. It is not taken that seriously." P8	
		Players need to perform and that need to perform leads to stress.	Constant pressure for on-field performance.	"… fear of failure and there is always going to be that fear of non-accomplishment." P1 "I have to practice harder, must play better." P9	
			Contracts and team selection cause stress.	"To be selected/performance. The longevity, especially in small unions." P10 "Selection, sitting on bench. When is my next contract and what will happen after that." P12	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
	SD=0.67 Anxiety/ Depression (items=6) α=0.837 M=1.65 SD=0.60 Problem=4.2% Smoke 4.7% smoke		Injuries are a major concern that causes stress.	"When player loses confidence due to injuries, higher game more the stress. High expectations … injuries, can't run away from it but stressful." P11 "Injuries makes it hard to come back on same level again." P13	
		The personal background of players causes stress.	Personal circumstances.	"Had issues with friends that did not work out and affected my rugby." P8 "As soon as you start a family there is more pressure to perform to get another contract." P9 "Being part of team can be stressful if you are introvert." P14	
			Need for support.	"Not always someone to help you with home issues." P4 "Need motivation from coaches and management it makes you feel insecure if not." P14	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
			Identity-related issues.	"Players are too proud to talk to someone else and sometimes it becomes too late when they start talking." P6 "If not happy on field I am unhappy off field." P7 "… I have to adapt and do it. If I don't do it, impact can be negative. If I exclude myself, it seems as if I am not part of the team … " P14	
			CMD-related issues.	"… performance anxiety was most damaging." P5 "… guys did not get contracts – some were depressed, now they gone and you don't know what has happened with them." P6	
		Stressors negatively influence on-field performance and off-field experiences.	A reciprocal relationship between on-field and off-field performance.	"Stressors at home can influence performance on field. Can't focus on rugby if issues at home." P4 "Sometimes opposition and the way things are done administratively, it affects me on field." P6	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
				"If not happy on field I am unhappy off field." P7	
			Stressors cause mental health issues.	"I am generally happy but can become irrational if stressors." P5 "I … become quiet, irritated and that goes over to personal life as well. Become irritated with wife, friends, family, because of personal uncertainty of future." P7 "I have lot of stressors. My mental health has huge impact on people in my life." P11 "Got injured … and could not play Currie Cup. Mentally disturbs me." P13	
		Stressors may positively influence game performance.	Stressors cause players to perform better.	"Now I use stressor to motivate me." P8 "[Stressors] bring the better out of me at the moment – I have to be better and the best." P9	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
		Players are externally motivated to improve mental health on and off the field.	Players do not only focus on rugby.	"… I focus very much on studies at the moment, continuously to almost keep my thoughts off from rugby." P1 "Play golf or something. Personal life has nothing to do with rugby." P7 "Life is bigger than my job. Everything is not rugby. Separate the two." P11	
			Players turn to other people for support.	"… surrounding myself with a people who are quite positive …" P2 "I will go speak to someone I am comfortable with and who will be interested in me." P14	
			Support from family members, friends and team members help with on-field mental health enhancement.	"Would talk to significant people in my life." P3 "Team mates back me, also my family." P11	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
		Players are internally motivated to improve mental health on and off the field.	Some players find it difficult not to focus on rugby and related expectations.	"… but it is difficult, you can't really avoid something that is fulltime your job." P1 "If you do not have form or play good it influences mental health." P7	
			Players cognitively resolve problems to enhance mental health.	"Have to go to quiet place, think about it and then dissolve it. I then get focused." P4 "I think back to what have done so far – how much work I have put in, it helps picking me up." P11	
			Physical preparation is important.	"… so the week for me building up to the game becomes very important and I do my preparations properly." P2 "… a lot has to do before the game and how I prepare myself – 80 minutes and I must focus. Sometimes easier said than done. Know specific rituals or techniques." P6	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
		Players experience no or limited support mechanisms.	Players are not aware of current support mechanisms.	"Honestly I don't know …" P6 "Only think I know of is campaign making us more aware of mental health. Don't know of helpline." P8 "No official support in team like mental coach. Team coach will just motivate." P14	
			Limited psychological/mental coach services are available.	"Sometimes you talk to Psych on way to practice, small talks, but it can help." P5 "Not a lot of other support. No mental coach at the moment." P12 "No official support in team like mental coach. Team coach will just motivate." P14	
		Players experience some support by management.	Some support is given by SARU, MyPlayers, and certain unions.	"There is no real support system in place, except SARPA when you are depressed …" P1 "MyPlayers – have anonymous hotline you can call any time of the day." P3	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
				"MyPlayers has call line. SARPA will try to help when speak about contract." P7 "Certain teams have support, others not." P10	
		Players enjoy personal support.	There is a need for personal one-to-one support.	"It is on a 'pop-in' base and not personal but more about how the team can be better." P1 "Get different psychologists. I like the ones who focus on the person and not performance. I appreciate having relationships." P5 "… will need personal support, not something generic." P6	
			Close friends and family members are viewed as support mechanisms.	"Have different personal mentors." P3 "Have two friends I can talk to." P14 "… think there is type of phoning in programme. Have not used it myself – I talk to wife …" P16	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
			Team members act as a support system.	"Team mates are support cause they deal with same issues and can relate." P7 "Team mates are my support – they are on similar boat, I am not alone. Team mates back me …" P11 "Players support each other." P14	
		Players are hesitant to ask for support.	Own mental strength is used as a support system.	"… and also my mental strength is also quite big it's also helpful …" P2 "My mental strength helps me to switch off." P11	
			The macho image of players keeps them from seeking support.	"Players are afraid to be identified." P3 "I know of players with stressors but they don't want to expose their own stuff …" P4 "Rugby players are macho, I'm the man, we don't want to admit we have problems. Proudness and image players need to portray." P15	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
		Players are in need of a support programme that is realistic and convincing.	The programme must motivate players to be the best they can be.	"Motivation is important." P1 "We need to talk about it (weaknesses) and that will make us stronger." P5 "When I know it is to help me, I will become part of it …" P15	
			The programme must attract players to participate.	"Guys will need to want to engage about their problems otherwise programme will not help." P5 "Make it fun and should not feel like work." P7 "Programme must include coaches who you can look up to, who have similar experiences. You must be able to learn from them." P14	
		The support programme must be individualised.	Individual support is a priority.	"More physical and personal approach where you can sit with someone." P3 "One on one mental coaching is important." P11	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
				"Must get individual attention where can sit down and talk face-to-face." P14	
			Relationships with role-players in the programme are important.	"Will not open up to someone not met before." P1 "Need someone personal to talk to and know it will not influence the game." P4 "I want to open up but tough cause you need to build relationship and they do not stay long enough for that to happen." P5	
			Mental toughness must be included in the programme.	"Game becomes more mental the higher you go (programme must accommodate for this)." P2 "Need someone to make me positive and convince me that things will be okay." P4 "Must focus on mental toughness – must be mentally strong." P11	
			Self and identity work is a necessity.	"Programme must assist with strength to let go of fear or irritation." P2	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
				"Analysis of players is good (has it currently at union) to know how each player operates and what they cannot cope with." P9 "To control emotions on and off field." P12	
		The support programme must not only focus on rugby.	The programme must assist with maintaining balance.	"Must assist with balance – to be excellent rugby player. I need balance between on and off the field." P6 "Programme must also focus on issues outside rugby …" P8 "Must be more than working on strategies …" P15	
			The programme must focus on life after rugby.	"Provide guidelines on life after rugby – support and skills for road ahead." P9 "… also when your time is up as rugby player." P12 "After rugby support …" P16	

CMD Problem Areas Covered in the Quantitative Questionnaire	QUAN Results	QUAL Themes	QUAL Subthemes	QUAL Results (Direct Quotes)	Interpretation of QUAN and QUAL
		The support programme must address how individual players fit into the team.	The programme must eventually favour the team as a whole.	"We need to talk about it (weaknesses) and that will make us stronger." P5 "It must be of benefit for all." P6	
			The programme must acknowledge the profile of the rugby players.	"Must keep pride of players into consideration … We have a tight schedule so it must be able to do it within tight schedule." P3 "The SA male ego is big. It makes us strong and competitive but also stubborn, arrogant and flawed." P5 "Programme must allow for individual and group work …" P8	

Discussion

The quantitative results showed that professional South African rugby players are experiencing CMDs. Problems with alcohol misuse/abuse (47.9%) seemed to be the highest CMD. Secondly, distress seemed to be experienced by a number of players (16.3%), followed by sleep disturbances (7%) and anxiety/depression (4.2%). Lastly, the players indicated that a number of them (4.7%) are smokers. As mentioned before, even though the statistical outcomes did not seem significantly high on face value, it was obtained from a population who many would consider as high-functioning athletes who compete at the highest level of their sport. Furthermore, at this level the margins between success and failure are very small and if only one player in a team experiences mental health issues, it can have a serious effect on the performance of that specific team as a whole. The presence of CMDs amongst professional rugby players seems to be a harsh reality, as literature and this study, are evidence of its existence.

In order to explain the quantitative results, the qualitative data explored the prevalence of CMDs in more depth. Findings revealed that the players identify mental health as a very real part of life. Professional rugby players link their own mental health to stressors that have either occurred in the past, are present in their lives or relate to their future. Mental health is viewed by the players as being directly linked to mental focus or the lack thereof. It was evident from the data that the personalities of players also play a role in how mental health is experienced. However, even though mental health issues are experienced as a real issue, it was evident that mental health is still commonly stereotyped – viewed as something that "should not be experienced" in a so-called "manly" sport environment like rugby, and therefore its existence is still at times either denied and/or ignored by the players and/or management. It is important to re-formulate mental health in a positive manner and to address it effectively in this specific

envronment of male dominence. This tailor-made approach is supported by research done by Cooper, Howse, Munson, Rae, and Shepherd (2017).

In relation to the CMDs that are experienced by the players, specific stressors were further found to be present in the lives of the players that influence both their on-field performances and their off-field functioning. In a related study by Hanton, Thomas and Mellalieu (2009), it was found that numerous aspects may contribute to elite athletes experiencing anxiety. In the current study, the rugby players indicated that they are under constant and immense pressure to perform. One reason for experiencing pressure to perform is specifically triggered by a fear of failure. According to Kremer et al. (2012), such a fear is not likely to be caused by failure itself, but rather by the consequences of failure. This profound statement makes sense in its relevance to the professional rugby players who participated in the present study – failure may be directly linked to non-selection and/or eventually their contracts not being renewed. Players indicated that they experience stressors regarding the renewal of contracts, team selection, and injuries, as these factors can affect their livelihood in the long run. According to Nicholls, Holt, Polman and Bloomfield (2006), injuries are one of the top three stressors experienced by professional rugby players. All these stressors are interrelated and form the basis of expectations regarding the performance of players. This is also exacerbated by the fact that rugby is a highly popular and, therefore, competitive sport in South Africa. As such, there are always other players aiming to be included to make it to the elite level and who are constantly adding to the pressure of the players who are already in a team. With a very large pool of young players being produced by high schools and the Varsity Cup system, the competition is always stiff and current players can easily be “replaced” by new players trying to gain entrance to the professional playing field, if they do not consistently perform.

Some of the off-field stressors relate to on-field performance. This was also evident in a study on professional rugby union players where Nicholls, Backhouse, Polman and McKenna (2009) found that non-sport stressors, such as tiredness and not getting enough sleep, contribute to the stress level experienced by rugby players. In the current study, it was also found that players experience stressors relating to who they are as individuals with very specific and personal needs. It was evident that players experience different personal circumstances, leading to specific stressors, which in turn can cause CMDs. The players, for example, indicated that they have a need for on-field and off-field support. They also indicated that they experience identity-related and CMD-related stressors. These findings relate with a study done by Beable et al. (2017) who focused on elite athletes hat emphasised the association between life stress and depression. Similarly, Gouttebarge et al. (2016) also found that 37% of the professional football players in their study experienced anxiety/depression.

It was evident from the results that the identified stressors have a detrimental effect on the players – on the field and off the field. There seemed to be a reciprocal relationship between on-field performance and off-field challenges regarding the detrimental influences of stressors. It was also evident that stressors may cause mental health challenges. In contrast, there were also a small number of players who indicated that stressors may enhance their on-field performance by applying the negative energy to motivate them to play harder. No stressors were, however, identified that can enhance off-field functioning.

In light of the influence of stressors on the lives of the participants, the players also indicated in what ways they improve their on-field and off-field mental health. For the purpose of this study, "personal mental health" refers to the mental health of players when they are not on the field even though it relates to their on-field performance. In relation to the CMD measurements in the quantitative data, the players identified both external and internal methods

they make use of to improve their personal mental health. The players not only turn to each other, but rely on both external and internal mental health improvement methods. This may be beneficial in a competitive sports environment. Similarly, Edwards and Edwards (2016) found healing interventions to be either internal or holistic of nature. With regard to improving their personal mental health while making use of external techniques, players firstly do not only focus on rugby, but on other activities in an effort to distract themselves. Secondly, players turn to other significant people, such as friends and family members, for support to improve their personal mental health. When making use of internal techniques to improve their mental health, players make use of cognitive techniques, such as thought restructuring and changing their internal narrative to resolve problems and to improve their mental health. Furthermore, the use of internal techniques may be regarded as a sufficient way of managing mental health, as it has been found that intrinsic drivers are effective (Kremer et al., 2012) and prevents elite athletes from developing burnout (Bicalho & Costa, 2018). However, players may also find it difficult not to continually focus on rugby and related expectations.

Similar to personal mental health improvement, two main themes were identified with regard to on-field mental health improvement, namely internal and external motivation. Internal motivation or the drive that players have to improve their on-field performance, refers to how players cognitively resolve problems to improve their mental health. Physical preparation (external motivation) is viewed by the players as important when they improve their mental health. Rist and Pearce (2016) are of the opinion that optimal support for professional athletes is essential for consistent on-field performance. The players also referred to the support they receive from family members and friends with regard to external motivation and on-field mental health improvement.

In light of the CMDs discussed in the quantitative results, the players were qualitatively asked about current support mechanisms that they were aware of and what they would have liked to see in a mental health support programme for elite South African rugby players. The players experience no or limited support within their current system, both at their unions and from the South African Rugby Union (SARU). They are either not aware of any support mechanisms or only referred to limited support mechanisms made available by SARU, MyPlayers (the official organisation of professional South African rugby players) and/or individual rugby unions. This was despite the mental health helpline that was launched by the career development division of MyPlayers in 2015. Professional players can make a toll-free call and be confidentially referred for professional mental health support free of charge (MyPlayers, 2018). This lack of support to athletes is supported by Breslin, Shannon, Haughey, Donnelly and Leavey (2017) who state that traditionally elite athletes do not receive support concerning mental health management. The provision of a mental skills support programme, especially on a professional rugby level, is of the utmost importance. Davidson and Edwards (2014) also found that mental skills training interventions are crucial to optimise health, strengths, competencies and skills amongst rugby players. These authors also indicated that there should be a shift in mental skills training amongst coaches and other stakeholders.

The players specifically mentioned the personal support that they enjoy from family members and friends, personal coaches and their team members. It was, however, clear that players are hesitant in asking for support due to what can be described as the stereotypical "macho-image" that they believe they need to portray on a consistent basis. According to Gulliver et al. (2012), young elite athletes in particular frequently do not ask for support due to stigma linked to mental health problems. Beable et al. (2017) also found that in the athletic community, stigma about mental illnesses still exists. As a result, the players rather rely on their

own personal mental support, which may be sufficient for some but sadly is often insufficient for most. Although players should be encouraged to make use of mental health support, using their own mental support may also be beneficial. A study by Tan, Omar, Tiawa, and Hamid (2015) show that elite athletes who make use of their own psychological skills, such as mental rehearsal, exhibit higher levels of enthusiasm and self-confidence. However, these skills appear to be used to optimise mental skills and not when significant mental health impairments are present where more professional interventions are warranted.

Moreover, the participants had specific ideas of what they would like to include in a mental health support programme for elite South African rugby players in the future. Such a programme should be both realistic and convincing. The content of the programme must, therefore, motivate the players to be the best they can be and the programme must also attract them to participate. It should, therefore, be constructed and marketed in such a manner that they can understand why they need to make use of it by highlighting the benefits it offers and how it can translate into improved on-field performance and general well-being. An important aspect that also came to the fore as a requirement for a mental health support programme was that the programme must be individualised. The need for a mental health support programme to be tailored to the individual needs of every player was emphasised in a study done with Pacific Island rugby players who emphasised the need for individual teaching and that a ‘one size fits all’ approach was not recommendable, especially with regard to ethnicity (Schaaf, 2006). The importance of facilitators of such programme building a relationship with role-players was also emphasised. The players also indicated that the construct of mental toughness must be included in such a programme, as well as self-worth and identity. In a related study by Schaaf (2006), it was found that identity plays an extremely important role in performance, as the identity of players may become part of a collective identity. On-field achievements are viewed as a type of

'family' achievement and that success reflects the support received by the 'family' – the team. Furthermore, the players indicated that the content of the programme must not only focus on rugby but must assist them in maintaining a balance between rugby and their lives away from the game. The players also indicated that they would like to be guided on how individual players fit into the team. Even though individual work was described as important, the programme also needs to eventually favour the team as a whole and must acknowledge the profile of the rugby players: Taking into account their tight schedules and the macho image they need to portray. Lastly, the players indicated that it was important to them that the programme must also focus on life after rugby to prepare them for when this occurs. Some elite athletes may experience the transition from their rugby career to main stream society as traumatic (Surujlal & Van Zyl, 2014). According to Gouttebarge et al. (2016), retired professional rugby players often experience CMDs. It may, therefore, be beneficial to prepare players for retirement during their rugby career to develop the necessary resilience with regard to CMDs and to develop healthy lifestyles for life after rugby.

End Notes

The present study indicated that professional South African rugby players are aware of mental health challenges and they feel that not enough is done to address stressors that contribute to these challenges. The stressors that the players reported influence both their on-field performance and their off-field functioning. These findings are not really new knowledge in the field of international sport, but this study was the first of its kind to be conducted in South Africa that indicated that South African professional rugby players experience stressors and that these stressors may lead to CMDs that may affect their on-field performance. If one player in a team experiences a stressor or CMD, it may have a detrimental effect on the outcome of a specific game or on the performance of the team. In turn, individual poor performance in one game by a

specific player can lead to a game lost. The level at which these players play, frequently has significant implications, not only for the players, but also for the entire team, its management and even the country.

The participants in this study indicated that they have a definite need for a mental health support programme, but also that there should be specific aspects included in such a programme for it to be effective and attract players. These needs were raised and will subsequently be used to develop a mental health support programme for professional South African rugby players and the findings of this article will, therefore, contribute to the development of such a programme. The programme will raise an awareness amongst rugby players with regard to stressors, which in turn can diminish CMDs, assist players when they are in need of support or contribute to the elimination of the stigma attached to seeking help.

Further research should be conducted in the future with larger sample sizes and amongst teams at different elite levels, such as provincial and national teams, to examine the impact of such a programme. It is foreseen that in the event that such a programme is implemented, it can assist players in becoming more mentally healthy and strong individuals that would ultimately translate into an improved on-field performance, as healthy individuals perform better.

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SECTION C

A proposed framework of a mental health support programme for professional South African rugby players

Introduction

Section C forms part of phase three of the present PhD thesis during which aspects were identified for potential inclusion in a proposed framework for a mental health support programme for professional South African rugby players. As mentioned in the orientation of the study in Section A, the final programme development with pre-testing, post-testing and evaluation do not form part of this phase. However, the proposed draft programme was sent to experts for their valuable input. The draft programme can be applied as an intervention in follow-up research and will be evaluated in more detail at a later stage. The aspects identified by the players as important to be included in a support programme are discussed in this section with a specific reference to the feedback of the expert evaluators. Phase 3 can, therefore, be viewed as the pre-development phase of the proposed framework for a mental health support programme.

Data Used as Basis for the Programme

This programme is based on information obtained from questionnaires that were completed by professional South African rugby players and from semi-structured interviews conducted with the players. The quantitative data indicated that players suffer from common mental disorders (CMDs) and that these disorders are linked to stressors that players experience. These stressors were identified during the interviews with the players. The players also felt that, at the time of the interviews, the available support mechanisms were lacking. As a result, they identified specific aspects that they would like to see in a mental health support programme for

professional South African rugby players in future. Table 1 below indicates these aspects that players felt important to be included in such a programme:

Table 1:
Aspects to be Included in a Mental Health Support Programme

Aspects Requested by Participants to be Included in a Mental Health Support Programme
The programme must motivate players to be the best they can be.
The content of the programme must attract players to participate.
The programme must also focus on life after rugby.
The programme must assist with obtaining and maintaining balance.
Individual support must be a priority and should be included in the programme.
Relationships with role-players in the programme are important.
Mental health coaches must be able to relate to circumstances.
Mental toughness must be included in the programme.
Self and identity work must be part of the content of the programme.
The programme must eventually favour the team.
The programme must acknowledge the profile of rugby players.

Procedure Followed in the Pre-development Phase of the Programme

The Delphi technique is a widely used and accepted technique (Chia-Chien & Brian, 2007), mainly developed by Dalkey and Helmer (1963). The technique is used to obtain specific information from a group of experts about an aspect about which little or no evidence exists. Although this technique is described as subjective and experts are not allowed to fully become

part of a study (Sobaih, Ritchie, & Jones, 2012), it works well as an alternative to conventional meetings and provides structure – counterproductive discussions are avoided (Thangaratinam & Redman, 2005). The technique allows for flexibility (Donohoe, Stellefson, & Tennant, 2012) and is employed to enhance effective decision-making (Hasson, Keeney, & McKenna, 2000), as it is well suited for consensus building (Chia-Chien & Brian, 2007).

Certain steps of the Delphi technique (Hampshaw, Cooke, & Mott, 2018) were followed in order to provide some structure and to identify the relevant information to be included in this proposed framework for a mental health support programme. The researcher himself acted as the facilitator during this process, as the expert evaluators were not participants and the following steps were, therefore, followed:

Step 1. The first step initiated the identification and selection of a team of expert reviewers. These experts were purposely selected to compile a diverse profile. As such, they included professional psychologists with experience in the sport environment and professional South African coaches who are appointed as the head or assistant coach of a professional South African rugby team, such as the Leopards and the NWU-Pukke Varsity Cup rugby team. This allowed them direct contact with professional South African rugby players on a regular basis. The promoter and co-promoter of the study – both experts in their own right and closely involved with professional rugby in South Africa – assisted in identifying possible reviewers. These experts were contacted and the following experts agreed to provide input:

- Prof. Ankebe Kruger, a sports scientist and psychologist from the North-West University, South Africa.
- Dr Jan Rauch, a sport psychologist at the Institute for Applied Psychology at the Zurich University of Applied Sciences, Switzerland.

- Dr David John Edwards, a clinical psychologist in the United Kingdom, specialising in mental well-being and performance, especially in a sport environment.
- Mr Jonathan Makuena, head coach of the Leopards Currie Cup and NWU-Pukke Varsity Cup rugby teams.
- Mr Andre Pretorius, assistant coach of the Leopards Currie Cup and NWU-Pukke Varsity Cup rugby teams.
- Mr Jaco Pienaar, forwards coach of the Sharks and Super Rugby.
- Prof. Pieter Kruger, a sports scientist and consultant clinical psychologist from the Institute of Psychology & Well-being, the North-West University, with extensive experience working in multi-national elite rugby performance and well-being: London Harlequins (ten seasons, United Kingdom); Brumbies Super Rugby (one season, Australia); Springboks Rugby World Cup 2015 (Bronze medal winners); Springbok Sevens (two seasons, World Series Champions); Sharks Super Rugby (two seasons, South Africa); Sharks Currie Cup (one season, Champions); Munster Rugby (one season, Ireland); English Premier Rugby (mental health and well-being service provider for five years).
- Prof Kobus du Plooy, a clinical psychologist from the Institute of Psychology & Well-being, the North-West University, with experience focusing on university and national elite rugby performance and well-being: Springbok Women's Sevens (four seasons, African Champions); and NWU-Pukke Varsity Cup (two seasons, Silver medal winners).

Step 2. After permission was obtained from the proposed reviewers, an email was sent to them with the request to evaluate the proposed draft programme. They all received the following documentation: Background information on the research and the programme, a short layout of the proposed programme and an evaluation form to provide feedback on.

Step 3. The evaluators were asked to use the answer sheet that was emailed to them to indicate which aspects of the programme would be relevant, which aspects should be adapted to be more relevant, and which aspects were not relevant at all. The feedback was then integrated with and applied to the proposed programme and the necessary adaptations were subsequently made. Not all of the reviewers made use of the answer sheet to provide feedback. Some gave feedback through email.

In general, all of the feedback received from the reviewers was hugely positive and a few changes were made to the original proposed programme. The following suggestions were made:

- A session on effective goal-setting with an emphasis on the process and performance goals (controllable) versus a focus on outcome goals (uncontrollable) should be included for each player and the team as a whole. This was proposed, as setting effective goals may lower uncertainty and anxiety amongst players by ensuring clarity and allowing for a focus on what is controllable to them. Consequently, this may also lead to more optimal levels in self-confidence, as goal-setting effects performance and performance boosts self-confidence (Wicker, 2008).
- In terms of life after rugby, a suggestion was made to communicate to players the importance of obtaining a qualification while still playing rugby in order to have something to fall back on when they retire from rugby or end their career due to injuries or when a contract is not renewed. Although services by MyPlayers in this regard are available, it seems as if not all of the players are aware of these opportunities. MyPlayers provide a range of services, including financial planning, legal support, career planning but also a confidential mental health support line. These services can perhaps be better marketed to the current cohort of players.
- A series of mental health workshops were proposed to be presented to all professional rugby players in South Africa with the focus on normalising the presence of CMDs, given the context in which they find themselves in. These

workshops can focus on how to overcome the stigma pertaining to mental health challenges that still exists within South African rugby.

- A session on professionalism – information on the use/misuse/abuse of alcohol use – was proposed. Such a session should highlight the impact of substance use on CMDs and the influence it has on the general well-being of players and their performance.
- Workshops and/or individual sessions with players that include the following themes were proposed: Alcohol management; risks associated with the use of substances and gambling; the impact and optimal management of the media and specifically social media; signs and symptoms of depression; mindfulness; flow/anxiety management; holistic well-being, including a bio/psycho/social/cultural and spiritual approach; the importance of studying and obtaining a qualification; proper planning of future career paths; effective financial planning and management; improving professionalism.
- In order to ensure that as many players as possible will benefit from the programme and be reached, it was also recommended that the programme must be mandatory, as opposed to an optional programme. Every player in South Africa who is playing professional rugby should, therefore, follow the proposed support programme.
- Include a weekly "in-touch" session to monitor the well-being of the players.
- The duration and frequency of the modules in the programme will have to be carefully considered. Players may be more available during pre-season, but it is important that continual support is available. Scheduled dates must, therefore, be flexible and various options should be available.
- The presenters must have an understanding of the professional rugby environment.

As part of the Delphi technique, further steps were recommended with regard to follow-up feedback sessions. However, in light of the nature of the aforementioned recommendations, the researcher did not regard it necessary to contact the reviewers again, as the suggestions were limited and clear.

Step 4. The suggestions received during step 3 were integrated with the programme.

Step 5. The programme will be prepared professionally and presented to both MyPlayers and SARPA to potentially be implemented in the future.

The Proposed Draft Programme

The researcher is in favour of dynamic and fluent programmes, as it allows for changes to be made according to the needs of all the stakeholders. The current programme is, therefore, regarded as a best practice guideline to indicate the crucial elements that should be used in such a programme. Different unions may, for example, have specific needs in which case certain workshops can be adapted or augmented to fit their specific needs. It is, however, important for the governing body (SARU) and MyPlayers to promote and sanction the programme in order to receive maximum buy-in from all the South African unions.

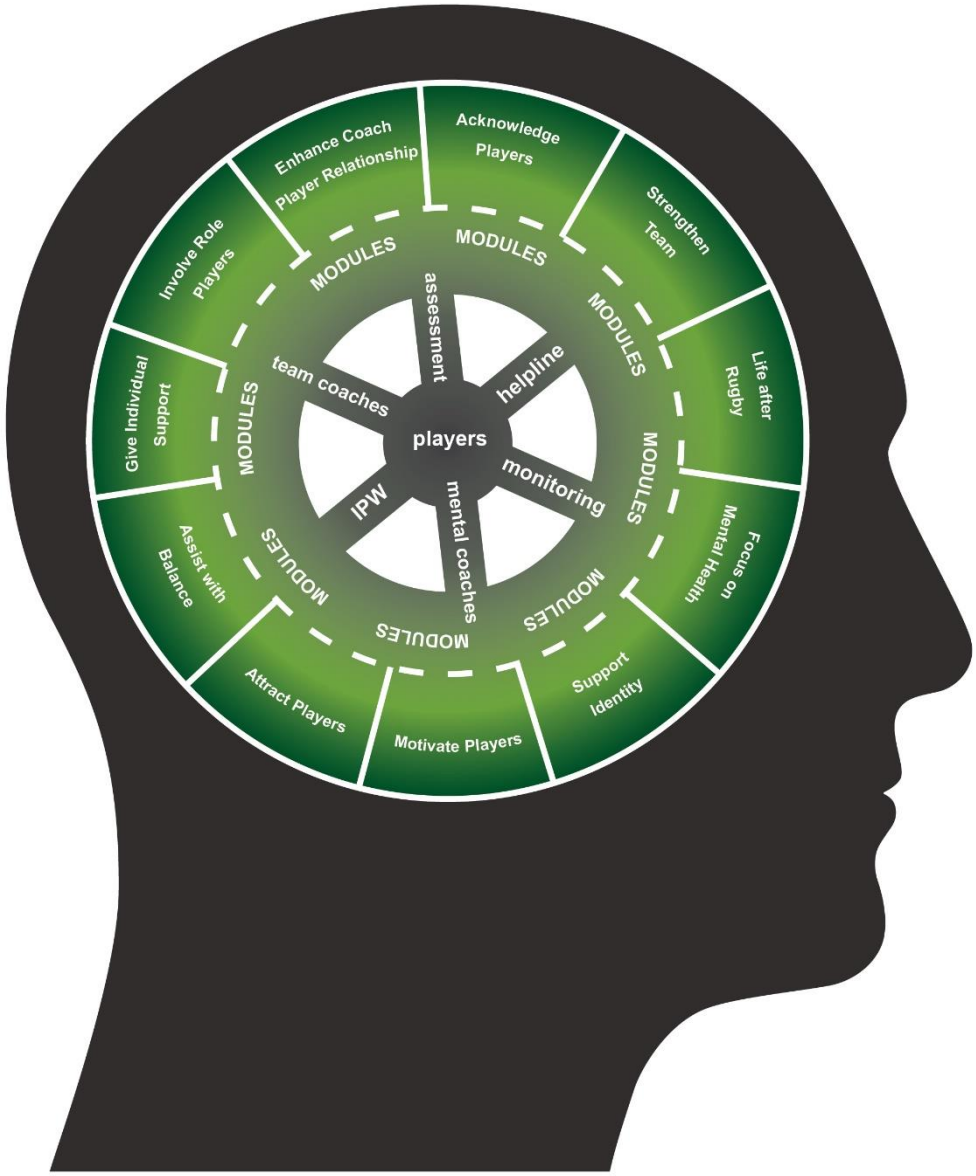

Figure 1: Proposed Framework for a Mental Health Support Programme for Professional South African Rugby Players

The programme will be flexible so that new players who join a team will also be able to attend various specific modules that can be presented at different touchpoints during the year. It is important that coaches acknowledge the value of this programme and drive it in their teams. During its initial roll-out phase, the programme will, therefore, be presented and explained in detail to all of them.

Figure 1 illustrates that the programme acknowledges the importance of the players and they form the core focus of the programme. The programme hinges on direct support for the players and will include assessments, the existing MyPlayers helpline, a monitoring process, support by team coaches and mental coaches, and support from the Institute of Psychology & Wellbeing (IPW).

An initial assessment is necessary to obtain a general profile of each player. New players will complete the Depression, Anxiety and Stress Scale 21 (DASS-21), the AthleticCoping Skills Inventory 28 (ACSI-28) and possibly an alcohol consumption screening when they join a team. The team coach of the relevant union will then be informed of completed assessments. The results of assessments will be centrally managed by MyPlayers and their current mental health service provider, the IPW. No-one but the relevant qualified professionals of the IPW will have access to the data of the players. After the initial assessment and discussion of the results with individual players, they will then be referred to either the MyPlayers helpline that is currently available, a mental coach or one of the other identified support mechanisms if deemed necessary to refer them after the initial assessment and discussion of the results with individual players. Additional referrals may also be considered, individually or in a group, depending on the specific needs of the players. These referrals will be centrally managed.

“In-touch”-monitoring sessions will be part of the programme to ensure an effective implementation and follow-up of the aforementioned interventions concerning players. The practical implementation of the monitoring sessions will have to be discussed with the relevant stakeholders, as these sessions will need detailed planning to be effective.

The above-mentioned support mechanisms will be strengthened by additional continual support in the form of modules that will include topics indicated under step 2 as well as any other necessary areas deemed necessary by the union, coaches and/or players. These modules

will be available to players to attend and will focus on several touchpoints during the course of the year.

The above-mentioned support mechanisms will occur within a context that was outlined by the players as being important and based on the feedback received from the interview sessions during the research study. The context is described below:

Players must be motivated to participate. Players do not always have enough energy available or are not intrinsically motivated enough to participate in a support programme, such as the one proposed in the present study. Although there is a dire need for a support programme, players will need motivation to participate, unless the programme becomes mandatory. Management, and especially coaches, can play a valuable role by highlighting the importance to players of participation in this programme: The programme will benefit them to become better people who will be able to improve their performance on and off the field. It is critical for players to understand that the programme can directly improve their on-field performances in order for them to understand why it will be important to fully participate in it.

The programme must attract players to participate. The programme must be of such a nature to motivate players to participate. The enthusiasm and professionalism of the module presenters, coaches and management are, therefore, of the utmost importance. The specific individual and team circumstances of players must also be considered. Sessions should not be too long or presented at times when players can provide limited attention, for example directly after a hard training session. Furthermore, the contents of presentations should be presented in a simple, easy to use, practical and engaging manner. Players will be attracted due to the style of presentations, content of the workshops, relevance of information, and the level at which information is pitched to players. All of the facilitators must meet the specified criteria in terms of qualifications, expertise and experience in order to be part of the delivery team.

The programme must ensure balance. The programme must not only focus on rugby and performance, but also on matters that players want to address when they are off the field. This will allow for a healthy equilibrium to be developed, to facilitate optimal focus during on-field performances, and sufficient recovery – both physically and mentally from games.

Individual support must be a priority. The ideal situation demands permanent qualified consultants – registered psychologists/mental coaches to be appointed on a full-time basis at each union. Comprehensive support will allow for the needs of individuals to be addressed in a timeously manner, which forms an important part of player support. However, various unions do not have the necessary resources available to provide for permanent psychologists/mental health coaches. In the event that limited resources poses a challenge, external consultants who are centrally managed can be utilised together with the mental health helpline, which is already in use.

Role-players have to be involved and committed. Relationships were reported to be very important to the players and all role-players in the programme must, therefore, be approachable. Presenters of workshops will have to be carefully selected to allow players the opportunity to establish meaningful relationships with them.

Coaches must be able to relate to players and vice versa. Ideally, coaches will have to be enthusiastic about the programme and convey their belief in its value to players. As such, all of the coaches must receive a thorough introduction to the programme, which will allow for sufficient questions to be asked and to have discussions about issues. If this is not approached correctly and coaches do not view the programme as necessary, it will be difficult to integrate the programme with the general training environment of the players.

Mental toughness must be part of the content of the programme. Mental toughness plays an important role in on-field performance and coping in general and must, therefore, be a crucial component of the programme. The programme should address mental health issues to enable players to operate within a normal functioning range. Additionally, players must be supported to move from an average state of performance to a state of high performance.

Self and identity work must be included. This will form another important component of the programme as it relates to the intrinsic motivation of the players. Without an intrinsic motivation, it is difficult for players to perform constantly on the highest level where professional players find themselves. Self and identity work should be included as a module.

The programme must ultimately favour the team. The aim of the programme will be to ultimately focus on individuals in such a way that it will translate into an advantage for the entire team and South African rugby players in general. A module can be presented that includes aspects, such as how to communicate effectively within a team environment both off the field and during matches.

The programme must acknowledge the profile of individual players. From the findings of the present study it was evident that a number of the participants felt that rugby players in general feel compelled to portray a certain “macho” type of image, which makes it difficult for players to seek mental health support when needed. This stigma can prevent players from seeking professional assistance when in fact it is needed. Seeking professional help should not be viewed as a sign of apparent weakness and must be avoided at all costs. The programme should ensure the confidentiality of individual players but should also aim to break down the perception that rugby players are weak when they experience difficulties of a mental health nature as this can happen to anyone. The programme should also be flexible to accommodate the

tight schedules of players. However, modules must be scheduled on an annual roster that will allow unions to plan with regard to where and when players can attend.

The programme must focus on life after rugby. This was also an important need that was raised by the participants, as numerous rugby players appear to become vulnerable when they are no longer part of an elite team anymore and sometimes they experience mental health-related difficulties during this transition phase. The programme should, therefore, aim to specifically support players who are no longer going to play rugby professionally. The programme should assist them to transition successfully into another career. In this regard, a module can be included that focuses on life after rugby.

Conclusion

It may take some time for the final mental health support programme for professional South African rugby players to be implemented. It is important that all stakeholders understand the implicit value of such a programme – not only to individual players, but also to the different unions and South African as a whole. It will, therefore, not occur without challenges. Many of the players referred to the profile of general South African rugby players and the fact that pride and their ego may prevent them from wanting to participate in any psychological or mental health-related interventions. Furthermore, not all unions may financially be in a strong enough position to implement the programme and a way should, therefore, be investigated on how to make a support programme accessible to all professional rugby players in South Africa. In this regard, it is suggested that the programme should be driven from MyPlayers/IPW and that it takes the form of modules being presented three to four times a year. The unions can then identify their specific needs and send players to attend relevant modules or even suggest additional modules that they would like their players to attend. Obtaining the buy-in and

cooperation of some of the coaches due to their personal beliefs regarding the importance of mental health and on-field performance may in itself also pose a challenge. Moreover, to develop a practical, effective programme that can be merged with an already tight schedule of players will be challenging. The researcher will, therefore, engage with the coaches specifically by introducing the programme to them and provide research evidence of the value of such a programme. It will also be important to recruit relevant role-players who will be involved in the training and presenting of the modules in an effective and professional manner.

These challenges are all acknowledged by the researcher and it is accepted that there may not be a simple or quick solution to address all of them. However, if the programme can be presented to all of the professional South African rugby players, it will add great value to South African rugby as a whole. It should, therefore, not be debated whether rugby at the highest level in South African can afford to implement the proposed programme, but rather that it cannot afford *not* to implement it in the near future.

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SECTION D

Critical reflection on the study

Introduction

This section provides a short overview of the study. This is necessary in order to put the three articles into context with the study as a whole. As this is a critical reflection that includes feedback on personal experiences as well, this section is written in the first person. The section commences with a description of the research process in general after which specific aspects of the research process are highlighted. The study is then concluded, followed by a discussion on the contribution of the study, limitations and recommendations.

Research Process

The research process started with a discussion with the current promoter and co-promoter on the possibility of conducting a PhD in psychology – focusing on sport. At that stage I did not have a specific idea of what I wanted to research. However, in light of both promoters being closely involved with South African rugby at various levels, it was evident that the focus would be on rugby. In the discussions that followed, the current gaps with regard to professional rugby in South Africa were highlighted and from practical experience both promoters confirmed that there was indeed a need to conduct research in the area of stressors and mental health pertaining to professional rugby players. A literature review on the topic confirmed this need. I was excited about the research, as it would be something different from what I have been doing for the past 15 years, namely research on youth, families and communities.

I completed my research proposal in the year that followed and obtained approval from the scientific committee and the Health Research Ethics Committee. I was very fortunate to gain

access to the professional rugby players via MyPlayers/SARPA due to the involvement of both my promoters in professional South African rugby. For the first time, a study on mental health is conducted with current professional South African rugby players. I made contact with the mediator at MyPlayers and the data gathering process commenced.

I decided to opt for a mixed methods design, as it was important to me to obtain a broad idea of how the players experienced CMDs and stressors, but even more important to procure the detail behind the feedback. Personally, I feel that the interviews contributed strongly to the research, as it was a rare opportunity to really engage with the players and hear directly from them about their personal and professional experiences.

It was important to me to invest in the players through my research, and even though I did not complete a full scientific process of programme development, I was able to present a draft programme that can be implemented and tested in follow-up research. Valuable input was also received from professionals and coaches that were integrated with the programme.

Section A was written with the purpose of providing a holistic view of the study, as much information as possible was obtained. The articles were written according to journal guidelines and will be evaluated individually. Individual articles do not allow for lengthy discussions on methodology and ethics, for example, and these aspects have, therefore, been addressed in Section A. The separate articles also do not refer to the mixed methods study as a whole, but only focuses on the relevant methodology, according to its specific focus.

The mixed methods design was followed within an article-format thesis. It was important that the articles in Section B reflected the objectives of the study and that the explanatory sequential mixed methods design was supported. The first article focused, therefore, on the quantitative part of the study by supporting objectives one and two during which the prevalence of CMDs was discussed and a relationship between CMDs and mental toughness was

determined. In an explanatory sequential design, the second part of the research process constituted qualitative research. In the second article, semi-structured Skype interviews were conducted to support the third objective, namely to explore the experiences of professional South African rugby players with regard to stressors and mental health. During the interviews I was able to explore the answers to the questionnaire comprehensively by focusing on the dynamics behind the stressors and CMDs. Lastly, in the third article the relationship between stressors and mental health was interpreted and explained by utilising both the quantitative and qualitative data. The integration in this article was important, as it is a major characteristic of an explanatory sequential mixed methods design. The integration was highlighted in the joint display of the data.

In Section C of the thesis, the data from all three articles were then integrated to identify aspects to be included in a proposed framework for a mental health support programme for professional South African rugby players. Feedback was also obtained from professionals and rugby coaches with regard to the content of the proposed programme and the feasibility thereof.

By following the above-mentioned process, the research questions were addressed. The data obtained from the questionnaires showed a definite prevalence of CMDs as well as a relationship between CMDs and mental toughness (see findings below). Furthermore, question three was answered by means of the data obtained from the semi-structured Skype interviews that indicated how professional players experience stressors and mental health (see findings below). In the third article, the answers to question four indicated a relationship between the stressors and CMDs. Lastly, question five was answered by identifying aspects from the quantitative and qualitative data that should be added to the proposed framework for a mental health support programme. The proposed framework for the programme is presented under Section C.

Data Gathering

From the start it was clear that it would be difficult to obtain sufficient data due to the busy schedules of the rugby players. I had to compete with a very tight rugby schedule consisting of constant practice sessions, national and international competitions together with the personal and family lives of the players. The co-promoters contacted the respective unions directly to explain the importance of the study and asked the unions to voice their support for the research as well. Ultimately, support from the unions allowed the researcher to obtain a sufficient sample of 215 players who were willing to complete the online questionnaire. This amounted to approximately 25% of the total population of professionally contracted rugby players in South Africa at that time. An existing questionnaire that had previously been used with retired professional South African rugby players as part of a bigger international study was also used in the present study after permission was obtained from the authors to adapt it for a specific purpose. The questionnaire was distributed electronically and was received back anonymously.

The qualitative part of the research consisted of 16 semi-structured Skype interviews that were conducted with individual players who gave their voluntary consent. The qualitative part of the research process took exceptionally long due to the busy schedules of the players. However, the contributions of the interviews made the study extra special to me, as I realised how fortunate I was for the opportunity to speak to the players personally. During the course of the interviews I realised that the average rugby supporter is unaware of the stressful circumstances under which the players perform. Since then, my view on rugby has changed altogether as I would look at the players now and think back to the interviews, knowing that while they are playing their hearts out, there are players who are experiencing significant difficulties. These are players with high profile lives, which contribute to many challenges experienced on and off the field. I eventually conducted the last interview and the transcriptions were completed.

Data analysis

A statistician from the statistics department at the North-West University assisted with the data analysis of the quantitative data. We held regular meetings to discuss the data together with the promoter after which I started to write the first article, which was a pure quantitative article. The second qualitative article necessitated thematic analysis, which was done by myself and a co-coder. I emerged myself with the data and performed a manual analysis. The following themes emerged from the data:

- The players' take on what mental health is.
- Current stressors that players experience.
- The influences of the stressors.
- How players enhance their personal mental health.
- How players enhance mental health on the field.
- Current support mechanisms that players are aware of.
- Aspects that players would like to see integrated into a mental health support programme.

These themes were then integrated into a first and second article and eventually applied to the proposed support programme.

Findings

Results from the quantitative data indicated that the players particularly experience problems related to alcohol use (47.9%), distress (16.3%), sleep disturbances (7%) and anxiety/depression (4.2%). A total of 4.7% of the players also indicated that they smoke. However, most of the players (96.7%) indicated that they perceive themselves to be mentally tough. A positive relationship was subsequently found between mental toughness and sound sleep (0.262), while negative relationships were found between mental toughness and

anxiety/depression positive (-0.423), anxiety/depression (-0.401), distress (-0.259) and CMD problems in general (-0.220).

Findings from the qualitative data showed that all the players know what mental health entails and the importance thereof within the broader picture of wellness. However, they indicated that they experience various stressors on and off the field. These stressors influence their performance on the field, but also elicit certain challenges when they are not performing on the field. Stressors that were mentioned include: The pressure to perform; fear of contracts not being renewed or not being selected for a team; fear of injuries; the constant awareness that their rugby career would eventually end; and that they would need to have alternatives in place once that time had arrived, personal stressors off the field, identity-related challenges and CMD-related issues.

The players felt that the stressors they were experiencing have a definite influence in their lives, both on the field and off the field. They mentioned the reciprocal relationship between on-field and off-field stressors and that the stressors could lead to mental health difficulties. It was however interesting to note that stressors could also motivate the players to perform better in some instances.

The players showed that in general they have the capacity to enhance their own mental health, whether in personal circumstances, or professionally on the field. They mentioned that they would attempt to not only focus on rugby, even though some players found this challenging, as rugby forms an important part of their lives. Some of the players turn to other people for support or participate in physical activities. The ability to use self-talk and to cognitively resolve challenges are also important to the players. The players value physical preparation and even follow certain routines or rituals.

Most of the players are not aware of support mechanisms even though some of them mentioned the mental health helpline provided by MyPlayers. However, even though they are aware of it, they could not provide any details of how the process of utilising the helpline works. According to the players, limited mental coaching services are available and they mostly turn to close friends and family members for support in the absence of other sources of support. The players indicated a definite need for a mental health support programme even though they indicated that at times their so called 'macho image' may prevent some of them from seeking assistance. As such, they prefer a programme in which they are valued as individuals and the programme should, ultimately, benefit the whole team.

The overall findings of the research indicated a definite need for a mental health support programme. The players feel strongly that the programme should motivate them to participate and their schedules should, therefore, be taken into consideration while the content should be attractive and exciting. They also expressed a need for guidance on how to obtain balance and how to deal with their so called 'macho image' in a way that it would not prevent them from seeking assistance when needed. Furthermore, they would like to establish optimal relationships with presenters of the programme and presenters must, therefore, ideally have an understanding of their unique situation as professional rugby players. They also expressed the need for the programme to focus on life after rugby. This matter constantly came to the fore throughout the interviews, as players are aware of their relatively short career as professional rugby players. The pressure to perform can lead to injuries and the subsequent possibility of not being selected for a professional team.

Lastly, the findings led to the development of a draft programme in Section C in which all the information from the data and the feedback from professionals and coaches were integrated.

Conclusion

The combination of the qualitative and quantitative findings support the importance of establishing a mental health support programme for professional South African rugby players. Although the initial data gathering process started slowly due to the busy schedules of the players, valuable data were gathered. The qualitative data definitely enhanced the quantitative data to support my original choice of utilising an explanatory sequential mixed methods design. The data showed that professional South African rugby players are experiencing stressors that may contribute to the presence of CMDs. The stressors were also found to have an influence on both their on-field performance and off-field life circumstances. Even though numerous players developed a way to cope with stressors, they also expressed the need for a structured support programme. Although there are certain support mechanisms in place – the helpline initiated by MyPlayers – most of the players remain largely unaware of the details surrounding such programmes. The availability of a managed support programme where modules are presented three or four times a year will benefit the players in ways that will not only contribute to their personal lives, but also to their on-field performances. Such a programme will not only benefit individual players but also their teams and South African professional rugby in general.

Limitations and Recommendations

As is the case with many studies, it would have made a bigger contribution if more players contributed towards the study. However, the sample size and data obtained from the participants were regarded as sufficient in order to determine the needs of the players and to come to certain conclusions. Follow-up studies can perhaps focus on specific aspects highlighted by this study: How players self-regulate themselves in terms of expectations; and how identity formation relates to their performances. Another study can be conducted with the coaches to

investigate how they view mental health and its importance with regard to on-field performance. It is also important that the programme proposed by this study must be implemented and tested to determine the true value thereof.

Contribution

The contribution of the study definitely centres on the combination of qualitative and quantitative research and the fact that this is the first scientific study where the data can be practically used to address stressors and mental health-related challenges that professional South African rugby players experience. If utilised effectively, a mental health support programme can make a positive contribution with regard to the on-field performances of rugby players. In comparison with other international teams where mental health challenges of a similar nature are already being addressed, this programme can be invaluable to South African rugby if the logistics are addressed and management and coaches acknowledge its value. By addressing the stigma that is associated with seeking mental health assistance by incorporating such a programme into the training of players, it can finally be broken down. As a result, players may become more comfortable with acknowledging stressors and that it is not always easy to perform at the level that is expected of them. In conclusion, this is a unique South African study that will hopefully contribute to the mental health, well-being and performance of professional South African rugby players in the medium-long term.

SECTION E

Appendices

Addendum I: Journal Guidelines for Submission

Article 1: European Journal of Sport Science

About the Journal

European Journal of Sport Science is an international, peer-reviewed journal publishing high-quality, original research. Please see the journal's Aims & Scope for information about its focus and peer-review policy.

Please note that this journal only publishes manuscripts in English.

European Journal of Sport Science accepts the following types of article:

- Original investigation
- Review

Peer Review and Ethics

Taylor & Francis is committed to peer-review integrity and upholding the highest standards of review. Once your paper has been assessed for suitability by the editor, it will then be double blind peer reviewed by independent, anonymous expert referees. Find out more about what to expect during peer review and read our guidance on publishing ethics.

Preparing Your Paper

Original investigation

- Should be written with the following elements in the following order: title page; abstract; keywords; main text introduction, materials and methods, results, discussion; acknowledgments; declaration of interest statement; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figures; figure captions (as a list)
- Should be no more than 4000 words.
- Should contain an unstructured abstract of 250 words.
- Should contain between 3 and 6 **keywords**. Read making your article more discoverable, including information on choosing a title and search engine optimization. There should be no more than 40 references, and no more than 4 tables and figures. Manuscripts that greatly exceed the word count will be critically reviewed with respect to length.

Review

- Should be written with the following elements in the following order: title page; abstract; keywords; main text introduction, materials and methods, results, discussion; acknowledgments; declaration of interest statement; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figures; figure captions (as a list)
- Should be no more than 4500 words.
- Should contain an unstructured abstract of 250 words.
- Should contain between 3 and 6 **keywords**. Read making your article more discoverable, including information on choosing a title and search engine optimization. There should be no more than 60 references, and no more than 4 tables and figures. Manuscripts that greatly exceed the word count will be critically reviewed with respect to length.

Style Guidelines

Please refer to these quick style guidelines when preparing your paper, rather than any published articles or a sample copy.

Please use British (-ise) spelling style consistently throughout your manuscript.

Please use double quotation marks, except where "a quotation is 'within' a quotation". Please note that long quotations should be indented without quotation marks.

[] All original investigations submitted to the journal where data are derived by experimentation from human volunteers must include a statement in the methods section that ethical approval was granted for the study by an appropriate ethics panel. Authors must include an explicit statement that the protocols were submitted to, and approved by, an institutional review board for testing of human subjects or ethics committee or that the protocols were performed under a license obtained from such a committee, board, or governing office. Please note that it is not sufficient to state that the study was in accordance with ethical guidelines of a given committee. It is journal policy that experimental studies on human subjects must provide a statement of appropriate ethical approval irrespective of the policy of authors' host institution. This policy concerns not only physical experimentation on human subjects but also data management issues related to interview, observation or survey type data. [] The only exception to the requirement of ethical approval is in the case where the data analysed in the original investigation was originally generated for another purpose and the data are freely available in the public domain (e.g., retrospective analyses of large public databases). Authors must state the source of data in the methods section, such that it is possible for the reader to freely access the data in the public domain and replicate the analyses. Authors must explain the reason for the lack of ethical statement in the cover letter addressed to the Editor-in-Chief. [] Symbols, units and abbreviations in papers must confirm to the Système International d'Unités (SI Units). Authors are advised to consult the National Physical Laboratory publication (R.J.Bell (ed) 1993, SI: The International System of Units. London. HMSO). For all abbreviations other than units, write the word or words to be abbreviated in full on the first mention, followed by the abbreviation in parentheses. [] When numeric values are given, a space must appear between the number and unit, as in 95.6 W and 25.0 N (exceptions are angles in degrees, e.g. 23.5º, and percentages, e.g. 15%). Separate compound units by a raised dot (N·m) and not by a space (N m); a compound unit formed from others by division should be indicated, for example, as ml·min-1 not as ml/min. Angular velocities should be expressed in rad·s-1 not degrees s-1 or º s-1. Some exceptions to the use of the SI are allowed, for example for heart rate (beats·min-1) and blood or gas pressure (mmHg). Other units and abbreviations should conform to Bell (1993) or Council of Biology Editors (1994). [] Scalar variables or constants that are represented by a single letter should appear in italics (e.g. v, k, x). Where the abbreviation is of more than one letter (excluding suffices or superfices), it should be set in Roman typeface, as should abbreviations of mathematical functions (thus a = dv /dt). Vectors should be indicated in bold and italics (e.g. F, v). For further and more detailed examples, authors should consult Council of Biology Editors (1994). Equations and formulae should, wherever possible, be presented on one line. [] Statistical definitions and symbols should conform to ISO3534- 1977, summarized briefly in Council of Biology Editors (1994). Some examples should make matters clear: $F_{2,12}$, H_0 , t , n =10, $P < 0.05$, r =0.71 (or for population correlation coefficient), SD, (for standard deviation of sample and population), s $\bar{x}$ - (standard error of the mean), $\bar{x}$ (upper case for population mean). Mean values with standard deviations or standard errors of the mean should be reported as, for example:

mean value 13.7, s = 2.5 m, or mean 15.7, s x - =3.6 kg (no need for ±). In tables and lists, the following is convenient (mean±s) or (±s), with the tabulated values in the form: 13.4 ± 7.2. Authors should, therefore, avoid the use of abbreviations such as S.D. and S.E.M.

Formatting and Templates

Papers may be submitted in Word format. Figures should be saved separately from the text. To assist you in preparing your paper, we provide formatting template(s).

Word templates are available for this journal. Please save the template to your hard drive, ready for use.

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Article 2: International review of Sport and Exercise Psychology

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International Review of Sport and Exercise Psychology is an international, peer-reviewed journal publishing high-quality, original research. Please see the journal's Aims & Scope for information about its focus and peer-review policy.

Please note that this journal only publishes manuscripts in English.

International Review of Sport and Exercise Psychology accepts the following types of article: original articles, review articles.

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Taylor & Francis is committed to peer-review integrity and upholding the highest standards of review. Once your paper has been assessed for suitability by the editor, it will then be double blind peer reviewed by independent, anonymous expert referees. Find out more about what to expect during peer review and read our guidance on publishing ethics.

Preparing Your Paper

Structure

Your paper should be compiled in the following order: title page; abstract; keywords; main text introduction, materials and methods, results, discussion; acknowledgments; declaration of interest statement; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figures; figure captions (as a list).

Word Limits

Please include a word count for your paper.

A typical paper for this journal should be no more than 8000 words.

Style Guidelines

Please refer to these quick style guidelines when preparing your paper, rather than any published articles or a sample copy.

Any spelling style is acceptable so long as it is consistent within the manuscript.

Please use single quotation marks, except where 'a quotation is "within" a quotation'. Please note that long quotations should be indented without quotation marks.

Formatting and Templates

Papers may be submitted in Word format. Figures should be saved separately from the text. To assist you in preparing your paper, we provide formatting template(s).

Word templates are available for this journal. Please save the template to your hard drive, ready for use.

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Article 3: Journal of Sport and Exercise Psychology

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a. Conception and design, or analysis and interpretation of data; and
b. Drafting the article or revising it critically for important intellectual content; and
c. Final approval of the version to be published.

Conditions a, b, and c must all be met. Individuals who do not meet the above criteria may be listed in the acknowledgments section of the manuscript.
*Uniform requirements for manuscripts submitted to biomedical journals. *New England Journal of Medicine,* 1991, 324, 424–428.

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Review articles and *single-study experimental/methodological reports* should not exceed 28 double-spaced pages (including references, tables, figures, etc.). *Multistudy reports* are encouraged, and may exceed the 28-page guideline, but they must be parsimoniously presented. *Research notes* are limited to 12 pages all inclusive. *Research reports* should be condensed as much as possible.

Submissions will be judged on their topical relevance, methodological adequacy, clarity of reporting, and potential scientific impact. For studies involving human subjects, the Methods section must include a statement regarding informed consent and institutional approval of the protocol. Authors are expected to have their raw data and descriptive statistics available throughout the review process and may be asked to provide elaboration.

Style. In preparing manuscripts for publication in the *Journal of Sport & Exercise Psychology* (*JSEP*), authors must closely follow the *Publication Manual of the American Psychological Association* (6th ed., 2010). Writing should be concise and direct. Avoid unnecessary jargon and abbreviations, and use an acronym or abbreviation only if the spelled-out version of a term is cumbersome. The full wording should precede the first use of an abbreviation. Avoid abbreviations in the title. Formats of numbers and measurement units and other style matters, *including capitalization and punctuation*, must follow the *Publication Manual of the APA*, 6th edition.

Cover Letters. Authors must submit a separate cover letter that lists (1) the title of the manuscript, (2) the date of submission, and (3) the full names of all the authors and their institutional or corporate affiliations. In addition to this essential information, a cover letter should be composed as described on pp. 230–231 of the *Publication Manual of the APA* (6th ed., 2010), and should include clear statements pertaining to potential

fragmented publication, authorship, and other ethical considerations.

Manuscript. The manuscript must be submitted as a Microsoft Word document. The manuscript should contain no clues as to author identity, such as acknowledgments, institutional information, and mention of a specific city. Thus, information that might identify the author(s) should be omitted or highlighted in black. The first page of the manuscript should include only the title of the manuscript and date of submission. All articles must include an abstract of 100−150 words and three to six keywords chosen from terms not used in the title. Carefully ensure that author names and dates of citations in the text match those in the reference list prior to assumed acceptance.

The correct order of the elements within a standard *JSEP* manuscript entering review must be as follows (this differs from some example APA-styled manuscripts):

1. Title and date of submission
2. Abstract
3. Keywords
4. Introduction
5. Methods
6. Results
7. Discussion
8. End notes
9. Acknowledgments
10. References
11. Figure captions
12. Tables

Figures. Each figure must be numbered, and each should be called out in the text in consecutive numerical order. All lettering and numbering that appears in the artwork should be proportionally large enough to be easily read. Each figure must be clearly identifiable by its filename. The artwork should be professional in appearance and have clean, crisp lines that are thick and dark enough to withstand size reduction and digital compression. Figures should not use color as the print version of *JSEP* appears only with grayscale artwork. In bar charts and graphs, shades of gray do not always reproduce well and should only carefully be used; instead, stripe patterns, stippling, or solids (i.e., black or white) are good choices for differentiation. All artwork, including photographic images, can and should be submitted in TIFF, EPS, or highest-quality JPEG format at a high resolution of *at least* 300 dots per inch (dpi) and sized to be legible when fit within a journal page. Upon submission, figures can be uploaded individually in their original file formats to preserve high resolution. The submission system converts and combines figures into a PDF for peer reviewers.

Tables. When tabular material is necessary, it should not duplicate the text. Tables must be formatted using Microsoft Word's table-building functions, with cells, rows, and columns. Thus, do not use the Space and Tab keys. Tables should be single-spaced and should include brief titles above them. Explanatory notes are to be presented in footnotes, below the table. The size and complexity of a table should be determined with consideration for its legibility when fitted to the size of single or multiple printed pages.

Common Issues. The following items are trivial but rise in significance owing to their high frequency in writing. Although they are part of APA style, which is requested by many publishers worldwide, these items are not always seen in accepted manuscripts. Please *do* adopt these simple practices.

- Always use commas and semi-colons in a series to separate the items. The comma is the mandatory first-order separator, and the semi-colon is reserved as the second-order separator, as in, “Sport, exercise, and physical activity; randomized, double-blind, and controlled trials; or enthusiasm, organization, and commitment are examples. . . .” Always include the comma or the semi-colon, as appropriate, before the conjunction word (and, or, but).
- The semi-colon is used only to separate, and never to introduce, in scientific English.
- The colon is used to introduce.
- Capitalize only the very few types of words as specified in the APA style manual, such as persons’ names. If in doubt, use lowercase.
- Always use the SI units (with a few exceptions, e.g., when other units are ubiquitous). Quantity and unit should be separated by a space; when used adjectivally, separate with a hyphen.
- Use acronyms sparingly. Spell out a term at each instance if you use it only two to three times. Differentiate between abbreviations (usually lowercase letters, usually with periods) and acronyms (all capital letters). Always use the spelled-out form to begin a sentence. Once you introduce an acronym, keep using it and do not revert to use of the spelled-out term.
- In text, parentheses always surround brackets: ([. . .]).
- In math, always use the multiplication symobl (×) or centered dot (·), never the asterisk (except in computer languages). In regular text, type a space on both sides of all operators, or allow the math software (preferably MathType) to apply the standard space. Separate the operations thus: { . . . [. . . (. . .) . . .] . . . }
- Leave no spaces before, between, and after any subscript or superscript.
- Please do not use the Tab key for any purpose other than to indent the first line of a paragraph.

Addendum II: Online Questionnaire

MENTAL HEALTH QUESTIONNAIRE

Distress

The following three questions are about your recent well-being. 'Recent' here refers to the past 4 weeks. For each question, indicate the answer that fits you best by checking the appropriate box.

	No	Sometimes	Regularly or (very)
Did you recently suffer from worry?			
Did you recently suffer from listlessness (lack of energy/motivation)?			
Did you recently feel tense?			

Anxiety/depression

The following 12 questions are about your recent health. 'Recent' here refers to the past 4 weeks. For each question, indicate the answer that fits you best by checking the appropriate box.

	Not at all	No more than usual	Rather more than	Much more than usual
Have you recently lost sleep over worry?				
Have you recently felt under strain?				
Have you recently felt you couldn't overcome your difficulties?				
Have you recently been feeling unhappy and depressed?				
Have you recently been losing confidence in yourself?				
Have you recently been thinking of yourself as a worthless person?				

	Better as	Same as	Less than	Much less as
Have you recently been able to concentrate on what you're doing?				
Have you recently felt you were playing a useful part in things?				
Have you recently felt capable of making decisions about things?				

Have you recently been able to enjoy your normal day-to-day activities?				
Have you recently been able to face up your problems?				
Have you recently been feeling reasonably happy, all things considered?				

Sleep disturbance

The following 4 statements are about the quality of your sleep in the past 4 weeks. For each statement, indicate the answer that fits you best by checking the appropriate box.

	Not at all	A little bit	Somewhat	Quite a bit	Very much
In the past 4 weeks, my sleep was restless.					
In the past 4 weeks, I was satisfied with my sleep.					
In the past 4 weeks, my sleep was refreshing.					
In the past 4 weeks, I had difficulty falling asleep.					

Alcohol misuse

How often do you have a drink containing alcohol?

- ❑ Never
- ❑ Once a month or less
- ❑ 4 times a month
- ❑ 2-3 times a week
- ❑ 4 or more times a week

How many drinks (standard glass) containing alcohol do you have on a typical day?

- ❑ None or 1 or 2
- ❑ 3 or 4
- ❑ 5 or 6
- ❑ 7, 8 or 9
- ❑ 10 or more

How often do you have 6 or more drinks (standard glass) containing alcohol on one occasion?

- ❑ Never
- ❑ Once a month or less
- ❑ 4 times a month
- ❑ 2-3 times a week
- ❑ 4 or more times a week

Smoking behavior

Do you smoke?

- ❑ Yes
- ❑ No

Mental Toughness Index

INSTRUCTIONS: Using the scale below, please indicate how true each of the following statements is an indication of how you typically think, feel, and behave as an athlete – *remember there are no right or wrong answers so be as honest as possible*.

1	2	3	4	5	6	7
False, 100% of the time						*True, 100% of the time*

1	I believe in my ability to achieve my goals	1	2	3	4	5	6	7
2	I am able to regulate my focus when performing tasks	1	2	3	4	5	6	7
3	I am able to use my emotions to perform the way I want to	1	2	3	4	5	6	7
4	I strive for continued success	1	2	3	4	5	6	7
5	I execute my knowledge of what is required to achieve my goals	1	2	3	4	5	6	7
6	I consistently overcome adversity	1	2	3	4	5	6	7
7	I am able execute appropriate skills or knowledge when challenged	1	2	3	4	5	6	7
8	I can find a positive in most situations	1	2	3	4	5	6	7

I am willing to participate in a follow-up SKYPE interview of about 30 minutes. My SKYPE address is:_.

I am aware that participation in the interview is completely voluntary and information will be treated confidential.

Addendum III: Problem Formulation and Background Sent to Expert Evaluators

Dear reviewer,

Thank you again for assisting me with the evaluation of this intended programme. I really appreciate your time and input. In order for you as an expert to review the suggested draft of the Mental Health Support Programme for Professional SA Rugby Players, a brief background is provided in the form of a problem statement, definition of Mental Health, paradigm of the study, as well as how data were gathered and analysed. Please use this information to assist in providing feedback on the attached draft programme. If you need any additional information, please contact me:

Herman.Grobler@nwu.ac.za

0027 72 234 9675

I would especially want to know:

- Does the basic idea of the intended programme seem viable?
- What aspects would not work and have to be altered/omitted?
- What aspects should be added?

Please give feedback to these questions by completing the separate evaluation form. It is important that you please provide detailed comments, especially where you make recommendations, as I would really like to integrate your recommendations to provide a valuable, practical programme.

Problem and objective:

In South Africa, the South African Rugby Union (SARU), consisting of 14 provincial unions representing the different rugby teams, is responsible for administering professional, rugby players. SARU. All professional rugby players in South Africa are also registered with the

MyPlayers rugby organization. MyPlayers has specific support services available for their members. However, currently no information seems to be available regarding the mental health status of these rugby players. There is also no official support programme customised for these players to facilitate mental health and consequently their psychological well-being.

Various literature indicate issues that athletes may experience, possibly contributing to Common Mental Disorders (CMD) (Brewer, 2009; Tod, Thatcher, & Rahman, 2010; Van Raalte & Brewer, 2014). MacIntyre, Jones, Brewer, Van Raalte, O'Shea, and McCarthy (2017) also highlight the presence of mental health issues in elite sport, which may have a negative impact on the on-field and off-field performance of the players. Unfortunately there is still a stigma to mental health, which may cause a barrier to disclosure, and eventually treatment (MacIntyre, Jones, Brewer, Van Raalte, O'Shea, & McCarthy, 2017). It is therefore necessary to do further research on the topic of mental health in sport, in order to present some kind of support for elite athletes, and in this study, specifically to professional South African rugby players

For the purpose of this study, mental health will refer to symptoms of common mental disorders (CMD), as motivated by another study conducted by Gouttebarge, Kerkhoffs, and Lambert (2016). Common Mental Disorders (CMD) specifically refer to two main diagnostic categories, i.e. depressive disorders and anxiety disorders (Patel & Kleinman, 2003; World Health Organization (WHO), 2017). These disorders are diagnosable health conditions and are considered "common", as they are highly prevalent in the general population and also impact on the mood of people diagnosed with these conditions (WHO, 2017).

It is also important to keep in mind the theoretical and philosophical paradigm from which the researcher approaches this study, as this approach will also be evident in the development of the programme. The researcher views research similar to the way in which he views life, i.e. from a Gestalt theoretical perspective, and more specifically – Field theory. According to Yontef (1993)

the essential property of a field lies in its dynamic nature and the interrelatedness of its parts. If something happens to one part, the whole field is affected. This can be applicable to this study, especially in the light of rugby players being part of a team - representing a particular country - and other personal, as well as familial relationships. When the mental health of a player is affected, it will surely have an influence on the rest of the field and that again may impact on the player him/herself. Furthermore Field theory supports the notion that each person may experience reality in a different way.

Data gathering:

Data were gathered by means of an on-line questionnaire (215 participants) and semi-structured skype interviews (16 participants). Both qualitative and quantitative data will be considered in developing the support programme.

Data analysis (Quantitative)

The answers from the quantitative questionnaire indicate the following:

The players portray significant levels of mental toughness (M = 5.69; SD=1.04). With regard to alcohol consumption, less than half of the players indicated that they consumed more than 4 alcoholic drinks per month (M = 2.31; SD=0.79). More players however indicated that they have more than six alcoholic drinks on one occasion (M = 1.79; SD=0.79) than having three or more drinks per day (M = 1.45; SD=0.87). However, it is important to view the aforementioned in context as, on average, this indication came from less than half of the players. On average, the players also did not suffer from sleep disturbances and instead experienced sound sleep (M = 3.54; SD=0.93) where 1 represents the lowest obtainable score and 5 the highest. Next, levels of distress measured the lowest (M = 1.65; SD=0.54) of all the CMD indicators. Finally, the anxiety/depression positive items (last 6 items) measured higher (M = 1.88; SD=0.67) than the first six anxiety/depression items (M = 1.65; SD=0.60).

When considering the prevalence of CMD identified from the data, the most pressing problem that the players were experiencing was a problem with alcohol that was reported by 47.9% of the participants. Other problems that featured to a lesser degree included distress (16.3%), sleep disturbances (7%) as well as anxiety and depression (4.2%). 4.7% of the players indicated that they were smokers. Finally, 3.3% of the players rated themselves as not being mentally tough.

The study also set out to determine to what extent the aforementioned data related with mental toughness. In this respect there is a positive relationship between mental toughness and sound sleep (r=0.262). Negative relationships were indicated between mental toughness and all other CMD with the highest relationship being with anxiety/depression positive (r=-0.423). Other significant negative relationships were also found with anxiety/depression (r=-0.401), distress (r=-0.259) and CMD problems in general (r=-0.220).

Data analysis (Qualitative):

The following sub-themes (table 1 and table 2) with codes were identified from the qualitative and need to be considered in developing the programme:

Table 1:

Sub-themes with regard to what should be in a support programme

Sub-themes	Codes
The programme must motivate players to be the best they can be:	Need for motivation Need motivation Need help Intrinsic motivation Need for programme Motivation and support during recovery
The programme must attract players to participate	Must be fun

Sub-themes	Codes
	Must keep tight schedule into consideration Must relate to speakers Talk about strengths and weaknesses Benefit team Any support Not only strategies
The programme must focus on life after rugby	Prepare for life after rugby Focus on life after rugby Life after rugby Life after rugby
The programme must assist with balance	Assist with balance on and off the field Also address issues outside rugby Balance is important Not only strategies Family support
Individual support is a priority	Individual contact Individual support Individual approach Individual private access Individual work Individual analysis Private or individual Individual coaching Individual support Need for MH coach Need mental coach
Relationships with role players in programme are important	Must have relationship with role players in programme

Sub-themes	Codes
	Must have relationship Must relate to speakers Need to relate to speakers Relationships Relationships with mental coaches
Coaches must be able to relate to circumstances	Must relate to speakers Need to relate to speakers Must look up to coaches
Mental toughness must be included in programme	Work on MT Talk about strengths and weaknesses MT and coping Coping strategies
Self and identity work	Work on self Talk about strengths and weaknesses Intrinsic motivation Self-work Self-work Self-work
Programme must eventually favour the team	Levels of support Must keep tight schedule into consideration Benefit team Group work
Programme must acknowledge the profile of rugby players	Levels of support Keep pride in consideration Must keep tight schedule into consideration Positively re-define MH Consider ego of players Need to relate to speakers

Sub-themes	Codes
	Ego must be put aside Work with pride Pride MT and coping Pride is important to address

Table 2:

Sub-themes with regard to current stressors that players experience

The pressure to perform	Fear of failure Fear of non-accomplishment Constantly have to perform Standards are high and measured daily Need to stay number one in the world Push through even though you have injury High pressure and expectations New guys take place Performance anxiety Not performing Have to perform Have to perform and play harder for family Being selected for team – have to perform Higher game, more stress High expectations
Contracts and team selection	Not making team is major stressor Not being part of tournament Not picked for team – not good enough Not getting contract

	End of contract – no income Dishonest coaches who lie about contracts Not being selected – can become personal Depend on contract Not being selected for team – sitting on bench Renewal of contracts Length of contract Depend on contract for finances Worry about what management thinks and if they will renew contract Team selections Rugby's short lifespan Renewal of contracts
Injuries	Having injury Push through even though you have injury Losing confidence due to injuries Injuries is biggest stressor Cannot get away from injuries Serious injuries After injury not so good as before Injuries if don't know how to handle it Injuries cause stress Injuries cause less confidence and then stress Injuries Injuries Injuries
Personal circumstances	Struggling to get to training Everything outside rugby goes to background. Pressures of performing make you not focus on rest of life Neglect 90% of life for the 10% of problem

	You reduce your life outside rugby Had to fall back on something else Can't take issues to field Stressors at home influence game Difficult to focus with issues at home Stressors off field are not dealt with -financial, relationships Off field stressors make concentration on game difficult Not having something to fall back on Schedules at home – not seeing family Financially dependent on contract Family to support, have to perform Personal issues have effect on game performance More stress when you have family – responsibility Nothing else to fall back on May need to move away from family and friends Specific background – personal life effects game Sacrifices to fit in Personality can cause stress, e.g. if introvert
Life after rugby	Life after rugby Longevity of the sport Uncertainty of what happens after rugby career Career after rugby Life after rugby
Lack of support	Aspects you don't have control over like coach who does not like you Not always support with home issues Unhappy on-field = unhappy off-field Not being motivated or getting feedback from management

Age issues	Getting older New guys take place To play in team when still young Have to perform and play harder for family Rugby's short lifespan
Identity-related issues	Have to be composed, think of image (ego'd) Not easy to talk about MH May need to move away from family and friends Fear of failure Fear of non-accomplishment Stressors at home influence game Performance anxiety Stressful to talk about issues cause of pride. Sometimes too late when start talking Not knowing how to handle stressors Personal issues have effect on game performance Have to perform and play harder for family Uncertainty of what happens after rugby career Personal and cultural sacrifices to fit in Personality can cause stress, e.g. if introvert
Mental Health-related issues	Depression due to not getting contract Not knowing how to handle stressors Off field stressors make concentration on game difficult Losing confidence due to injuries Difficult to focus with issues at home Performance anxiety
Uncertainty in general	Uncertainties Uncertainties – injuries, team selections Uncertainties are stressful Uncertainty of what happens after rugby career

Draft 1 of a Mental Health Support Programme for Professional South African Rugby Players

From the interviews with the players it was clear that there is a need for such a programme, but that it should be a personalised programme presented over a period of time, during which relationships and trust can be built. This is a challenge, as players are never permanently employed. However, from the interviews it seems as if most players have one to three year contracts.

In developing a support programme, the following should be considered, based on information obtained from the data:

- The programme should be of such a nature that players can benefit from it no matter the period of their contract
- The financial budgets of the different unions with regard to access to such a programme
- Current support mechanisms that do exist, e.g. the MyPlayers helpline and mental coaches/psychologists who are utilised in certain unions, must be integrated into the programme to prevent duplication
- Additional support that might not be currently available to players, but might be available, e.g. relevant workshops presented in corporate settings and on other levels of sport
- There must be a focus on addressing mental health-related issues
- There must be a focus addressing current stressors
- The sub-themes that were identified during data analysis must be addressed in some way
- The programme must be attractive and developed in such a way that players would want to join
- There must be individual, as well as group activities/interventions

- The focus is to address mental health of the players that will ultimately advantage on-field performance, as well as wellbeing in general

My goal is to present a mental health support programme that is integrated into the contracts of players, in order for it to become part of their training process. It should be presented in such a way that players experience it as invaluable to their performance and something that is not exposing weaknesses of players, but is there to ultimately enhance their on-field performance and also provide support off the field. Some aspects may already be addressed by MyPlayers or some of the unions, but it would be to the advantage of national rugby of South Africa in general to have a mental health support programme available to players. In this way mental health can be addressed in a non-threatening manner, making it acceptable to talk about certain issues and work through it.

Possible challenges:

- Many players refer to the profile of the general South African rugby player and the fact that pride and ego may prevent them from wanting to participate in any psychological or mental health-related interventions.
- As mentioned before, not all unions are financially strong and a way should be investigated in how to make a support programme available in a way that it is accessible to all.
- Getting the buying-in and cooperation of some of the coaches due to personal beliefs with regard to the importance of mental health with regard to on-field performance.
- Providing a practical, effective programme within the tight schedules of the players.
- Getting relevant role players that can be involved in the training and presenting of the programme.

It is important that the programme is flexible to accommodate players and be as effective possible.

Possible workshops/seminars/activities (these will vary from time to time according to needs of relevant role players):

- Individual and collective identity - where do I fit in the team and in professional rugby?
- SWOT analysis
- Life after rugby
- Motivation to perform
- Dealing with off-field challenges to enhance on-field performance
- Alcohol: decreasing performance and wellbeing
- Series of Mental Health seminars
- Coping with stressors

Thank you

Herman Grobler

Addendum IV: Outline of the Proposed Programme

SA Rugby Mental Health Support Programme

The name refers to players who convey/reveal/communicate (express) themselves through rugby. Rugby is a significant part of who players are, therefore a part of their identity. Players need to know who they are as individuals and how they fit into the bigger collective identity of a team and SA rugby - for this, they need support. Mental support is still very much underutilised in this sport. Especially within rugby the so-called 'macho image' of players prevent them from consulting when support is needed.

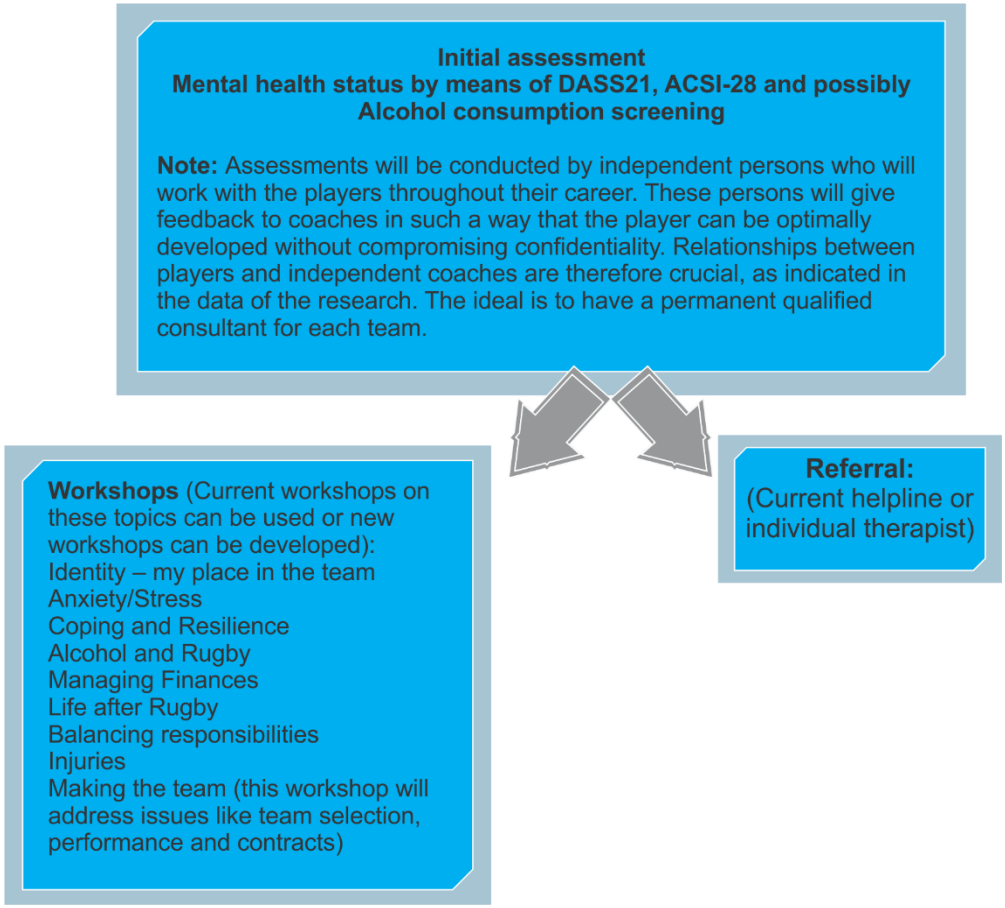
The goal of this programme is to provide ongoing support to South African professional rugby players by connecting mental health support to the physical aspect of the game. The importance of mental support cannot be emphasised enough in bringing balance to a very physical game and ultimately to enhance on-field performance. Ideally the programme will become part of the general training programme to such an extent that it is viewed as non-negotiable by players and coaches alike.

For the first round of expert evaluation the programme will be presented in a more descriptive manner. After input from experts a more detailed visual programme will be developed that will eventually be presented to the relevant role players for consideration.

The programme will consist of different levels and will be dynamic, providing flexibility to accommodate new players, players who have been in the game for a while, as well as players are on the verge of ending their careers as professional rugby players.

All Players will need to undergo a psychological assessment to obtain a profile of their current stress and anxiety levels, as well as their coping skills. As indicated by the outcome of the study, it may also be advisable to do an alcohol consumption screening. This assessment can be done with current players, as well as new players joining a team. Here should be an agreement between teams (with permission of players) that the data from this assessment can be transferred between teams when a player leave one team to join another. The information will however only be made available to the Psychologists/mental coaches who work with the players on this level.

The ideal is for MyPlayers/SARU to have a team of consultants who they can make use of to present workshops to the players. In this way it is envisioned that the players will get to know the presenters and form a trusting relationship with them.



The above workshops will be available to the players throughout their contracts and can be individually adapted to the need of each union

Addendum V: Expert Evaluation Form

Please comment on the following:

1. Does the basic idea of the intended programme seem viable?

Comment	Yes, definitely	Yes, but there can be some changes	Yes, but it should be revised significantly	No, definitely not
Motivation				

Alternatively you can provide feedback on the suggested programme itself.

Addendum VI: Proof of Turnitin Submission

Digital Receipt This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission. The first page of your submissions is displayed below. Herman GROBLER HB Grobler turnitin 123376600:HB_Grobler_turnitin.docx ts_a90099ec-b61a-48b3-b940-5c0… 70.72K 62 18,410 101,190 04-Nov-2018 06:50PM (UTC+0200) 1032516150

Addendum VII: Example of Qualitative Data Analysis

Table 1:

What is Mental Health?

What is MH?		
Open coding	**Axial coding**	**Selective coding**
One Not being stressed about future Not stressed about consequences of previous training Bad MH is not being able to function because of what has happened or fear of future Worrying about test selection Mental aspect of focusing just on rugby, good or bad Healthy MH is being happy of what you have become Being confident in where you are at moment Heavy pressure stresses you and changes mental state	Good MH is about not being stressed about the future Good MH is about not being stressed about present and past Bad MH – past and future fears Worrying Mental focus on rugby About contentment Heavy stressors change mental state	**MH is linked to stressors over time** Good MH is about not being stressed about the future Good MH is about not being stressed about present and past Bad MH – past and future fears Worrying Heavy stressors change mental state Heavy stressors change mental state Stressors influence MH Linked to stressors Stressors influence MH How to handle stress About stressors and coping Stressors and pressure performance **Mental Health is about a mental focus** Mental focus on rugby MH relates to mental toughness Moving on from mistakes MH is about having a strong mind It is about cognitive decision-making Its about focusing on the game now Firstly a cognitive process Cognitive decision-making Mental processes Mental processes and coping About mental toughness Cognitive process Mentally fitness Cognitive process About stressors and coping Coping Mental process
Two Being mentally tough to handle pressure MH is linked to patience and intensity of the level you play at How tough player is to handle issues and pressures that come with it MH is strength to forgive and let go of fear/irritation MH is to quickly move on from mistakes made MH is not worrying about making mistakes. If you do you "go into yourself" and that is not good	MH relates to mental toughness Personality plays a role Linked to level of play Moving on from mistakes	
Three MH = very NB, especially in contact sport Have to be on top of game mentally and physically, but more mentally To train mind to be strong Players ignore importance of the consequences concussions because they stress that they will be losing contract	Mental health is NB in contact sport MH is about having a strong mind Stressors influence MH	

Attend to mind after concussion It is about how you think after injury – the fear of not being chosen and need to perform Players do not take MH serious, management do MH is linked to the now and not consequences, e.g. effect of injury later	It is about cognitive decision-making Not taken seriously enough Its about focusing on the game now	**Personality plays a role in MH** About contentment Personality plays a role About confidence Linked to happiness/unhappiness
Four Getting the body ready by "getting mental" MH is to first think about decisions and then act physically	Firstly a cognitive process	**Although MH has an important role to play in rugby, it is underplayed** Mental health is NB in contact sport Not taken seriously enough Seriousness of MH is NB Has important role Overlooked Not taken seriously enough Important role Stigma
Five Stigma around MH Need to stand up for important role of MH MH plays NB role in sport Big problem with MH when comes to male ego Mental part is NB to train players physically	Stigma Seriousness of MH is NB Has important role	
Six MH is overlooked a lot MH is linked to stressors on and off the field More stressors cause not 8-5 job and that influences MH	Overlooked Linked to stressors	
Seven MH = to be happy and confident in ability MH is if you do not allow factors to influence you mentally	About confidence Cognitive decision-making	
Eight Not enough emphasis on MH MH is not taken seriously enough May be more mental than physical issues related to rugby and should be addressed more	Not taken seriously enough	
Nine MH is about being mentally strong Coping with ups and downs	Mental processes	

It is to be mentally strong		
Ten Means a lot of things Its about coping with ups and downs and pressures RP do not know how to cope with pressures and stress Need for support and assistance Pressure from family friends and team mates influence MH	Mental processes and coping Stressors influence MH	
Eleven How mentally tough you are How you mentally handle top level expectations	About mental toughness	
Twelve Its about a mind-set re daily job/rugby career Being happy or unhappy About handling stress levels after rugby	Cognitive process Linked to happiness/unhappiness How to handle stress	
Thirteen MH plays NB role with R players Its about being mentally fit Getting mind on right place to perform best	Important role Mentally fitness Cognitive process	
Fourteen Can't hear		
Fifteen How to cope with stress and uncertainties	About stressors and coping	
Sixteen How mentally cope with pressure How you perform under pressure About how you are influenced by external factors	Coping Stressors and pressure performance Mental process	

1.1 Codes

MH is linked to stressors over time

Mental Health is about a mental focus

Personality plays a role in MH

Although MH has an important role to play in rugby, it is underplayed

1.2 Data obtained from transcription

One	
P: Well, I think MH is if you can…, for me personally, if people can wake up and you are not stressed about what's to come.	*Not being stressed about future*
P: and consequences of the previous day's training or previous week's training or whatever. People wake up and that is what good MH is for me. Bad MH would be uhmm when you can't function because of past happenings or something that is going to happen that you are scared about. If that makes any sense to you.	*Not stressed about consequences of previous training* *Not being able to function because of what has happened or fear of future*
P: For me it is the worrying about the future or what's to come, like test selection or, you know, or it would be a disappointment in a previous game of playing or a previous week of training or you know, as a… mental aspect of focusing just on rugby, that would be a healthy or not healthy. A lot of you wake up and you can function because you are pretty happy with what you have become or you are very confident in that phase, but as soon as you become uhmm under stressed or nervous or under pressure, heavy pressure, then it changes your, your mental state which obviously affects your MH.	*Worrying about test selection* *Mental aspect of focusing just on rugby, good or bad* *Healthy MH is being happy of what you have become* *Being confident in where you are at moment* *Heavy pressure stresses you and changes mental state*

Two P: well a, I have to take a guess and say, it means how mentally tough a person is you know a rugby player in terms of handling the pressures that comes with the intensity, with the patience with all the other things that come with playing at the top level you know so I think it has to do about how tough the player is in handling all of those issues and pressures that come with it. irritation then the longer the day becomes for you. So it becomes very important to move on very quickly from a mistake and I think personally when you are not personally strong it will be tough to move on because then you will possibly go into yourself and you will be worrying about making many mistakes and there is no	*Being mentally tough to handle pressure* *MH is linked to patience and intensity of the level you play at* *How tough player is to handle issues and pressures that come with it* *MH is strength to forgive and let go of fear/irritation* *MH is to quickly move on from mistakes made* *MH is not worrying about making mistakes. If you do you "go into yourself" and that is not good*
Three Mental health is very important Especially in contact environment Have to be on top of game physically and mentally, more mentally Many do not pay enough attention to MH You can train mind to be strong and develop for r players Especially after concussion – many rugby players ignore importance of the consequences	*MH = very NB, especially in contact sport* *Have to be on top of game mentally and physically, but more mentally* *To train mind to be strong* *Players ignore importance of the consequences concussions because they stress that they will be losing contract* *Attend to mind after concussion*

You have to attend to your mind after concussion – players are scared not to be chosen, it is about performance. Management takes it seriously, but not players. It can be career ending injury so they keep concussion quiet They don't want to be let out of important moment of the game They only think of now and not consequences	*It is about how you thing after injury – the fear of not being chosen and need to perform* *Players do not take MH serious, management do* *MH is linked to the now and not consequences, e.g. effect of injury later*
Four Have to get mental first to read the body. Upstairs you make right decisions and then comes physical. Mental first	*Getting the body ready by "getting mental"* *MH is to first think about decisions and then act physically*
Five There is stigma around mental health and we need to take stance against it because it plays important role in sport. In SA we have big problem with male ego, also when it comes to MH It is a lot more NB in preparing rplayers for physical part of training.	*Stigma around MH* *Need to stand up for important role of MH* *MH plays NB role in sport* *Big problem with MH when comes to male ego* *Mental part is NB to train players physically*
Six Overlooked a lot, it is important point, there are lot of stressors on and off field. We have stressors that other people do not have to go through cause of not normal 8-5 job	*MH is overlooked a lot* *MH is linked to stressors on and of the field* *More stressors cause not 8-5 job and that influences MH*

Seven To be happy, confident in ability and what you do as player and not let factors influencing it.	*MH = to be happy and confident in ability* *MH is if you do not allow factors to influence you mentally*
Eight What is MH? Not enough emphasis on MH for Rplayers. It is not taken that seriously. There may be more mental issues than physical issues and this should be addressed more.	*Not enough emphasis on MH* *MH is not taken seriously enough* *May be more mental than physical issues related to rugby and should be addressed more*
Nine Have to be strong – do contract work and have to cope with the ups and downs – everything that comes your way. You have to be mentally tough.	*MH is about being mentally strong* *Coping with ups and downs* *It is to be mentally strong*
Ten Lot of things that it can mean. R players go through lot of ups and downs. Pressures of life and getting selected or not. Pressure on rp is very tough. Competition is hectic. They will do everything to get selected. They don't know how to cope with pressure and stress. Need for assistance and support. Out of matric selected and then later not, so pressure from society, teammates and family members to perform	*Means a lot of things* *Its about coping with ups and downs and pressures* *Competitiveness will make players do anything* *RP do not know how to cope with pressures and stress* *Need for support and assistance* *Pressure from family friends and team mates influence MH*

Eleven Take a guess – it means how mentally tough person is i.t.o. handling pressures comes with intensity, expectations and others things coming with playing at top level and how they handle it mentally.	*How mentally tough you are* *How you mentally handle top level expectations*
Twelve What sort of mind-set are they in re their daily job and career after rugby. Happy, unhappy, stress levels after rugby career. Mindset re selection, sitting on bench	*Its about a mind-set re daily job/rugby career* *Being happy or unhappy* *About handling stress levels after rugby*
Thirteen Plays NB role for Rplayer – need to be mentally fit – mind must be on right place to perform on level best	*MH plays NB role with R players* *Its about being mentally fit* *Getting mind on right place to perform best*
Fourteen Can't hear	
Fifteen How to cope with stress and uncertainties	*How to cope with stress and uncertainties*
Sixteen It is how you cope mentally with pressure situations and to perform under pressure – How you stay the same during up and downs. How influenced by external factors.	*How mentally cope with pressure* *How you perform under pressure* *How you stay same during ups and downs* *About how you are influenced by external factors*