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Sport Injuries and Affective States in Elite American Basketball Players in Greece: A Qualitative Study

by

ATHENA TANATZI

Bachelor in Psychology, University of Crete, Greece, 2017

Approved by supervising committee: Dr. Antonis Hatzigeorgiadis, Dr. Marios Goudas, Dr. Yannis Theodorakis

Main Supervisor: Dr. Ioannis D. Morres

Supervisor 2: Dr. Nikolaos Comoutos/Zourbanos

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TABLE OF CONTENTS

Chapter **Page**

LIST OF FIGURES

Figure **Page**

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ABSTRACT

This qualitative study examined the relationship between affective states and injuries in the A1 Greek Basketball League. A phenomenological design was utilized to explore the affective states of 5 male American professional basketball players in regards to their injuries. Data was collected via the webplatform Skype using a semi-structured, in-depth interview guide, and then transcribed verbatim and analysed following the Interpetative Phenomenological Analysis guidelines. The analysis of the interviews generated 14 central themes throughout 4 main phases of the injury. These themes related to athletes' affective states (emotional states) before the injury, at the onset of the injury, during the rehabilitation and the return-to-play process, as well as their coping strategies and the received social support. Athletes' affective states before the injury were mostly negative and included frustration, low motivation, anger, low mood, as well as playing with pain and discomfort. The negative affective states before the injury preceded athletes' injuries. Their affective states at the occurrence of the injury were also predominately negative and involved worry, fear and disbelief. During the rehabilitation phase athletes reported a fluctuation of affective states dependant on the specific part of rehabilitation (beginning-middle-end), with excitement and motivation being the main emotions for the beginning and the end, while frustration being the main emotion for the middle part of rehabilitation. For the return-to-play phase, athletes experienced a mixture of affective states dominated by excitement and nervousness. Apart from experiencing a series of affective states, athletes adopted several coping strategies, with social support being a key component to coping with the negative affective states in different phases of the injury (injury occurrence-diagnosis-middle part of rehabilitation). The findings of this small study seem to raise important considetrations regarding the management of professional basketball players' injuries including prevention, rehabilitation and return-to-play process. However, further research with larger samples is needed.

INTRODUCTION

Much has changed on the global basketball scene since the original Dream Team stormed its way to Olympic gold some 22 years ago. The sport is now a fixture in most of the countries around the globe and more than 200 basketball-playing nations compete against each other. Consequently, basketball is now the second-most popular team sport in the world, just behind soccer, with more than 300 million people worldwide driving to the hoop (FIBA, 2008; Jose & Maurizio, 2000; Tufa, 2015; Ali, 2017).

Sports and Mental Health

Participation in competitive sports has been suggested to positively affect mental health (Cumming et al., 2012; Goutterbarge et al., 2015; Foskett & Longstaff, 2018; Rice et al., 2016). However, there are several mental health disorders (depression, anxiety, sleeping or eating disorders, overtraining syndrome, etc.) in a relatively large proportion of competitive athletes (Cumming et al., 2012; Gouttebarge et al., 2015; Foskett & Longstaff, 2018; Doherty et al., 2016; Rice et al., 2016; Reardon & Factor, 2010). Specifically, professional athletes experience mental health disorders as common as the general population, with female athletes being affected more frequently compared to males (Gulliver, 2015; Markser, 2011; Hammond et al., 2013; Rice et al., 2016).

In individual sports, athletes have shown higher scores in certain mental health disorders than athletes in team sports (Frank et al., 2015; Markser, 2011; Walker et al., 2007; Backmand et al., 2001). Approximately 60% of long distance runners experience exhaustion depression from overtraining at least once during their career, whereas 45% of them experience sport trait anxiety (Armstrong & VanHeest., 2002 as

cited in Markser, 2011; Morgan et al., 1987). Lightweight wrestlers and rowers demonstrated a prevalence of binge eating disorder at 52% and subclinical eating disorders at 11% (Thiel et al., 1993). In elite judoists and cyclists the prevalence of eating disorders was 22.5%, whereas depressive mood symptoms accounted for 73% of the variance in bulimia and 64% in global eating attitudes (Filaire et al., 2007). Gymnasts and long distance runners showed 60% prevalence in eating disorders (Puffer & McShane, 1992; Calhoun et al., 1998). Almost 68% of elite swimmers met the criteria for clinical symptoms of a major depressive episode before competition, with more female athletes experiencing clinical symptoms of depression than males (Hammond et al., 2013). Finally, 2-4% of track and field athletes showed feelings (symptoms) of depression, melancholy and unhappiness (Thiel et al., 2010 as cited in Frank et al., 2015).

Team sports report a higher prevalence in eating disorders, but lower prevalence in depression and anxiety compared to individual sports. Specifically, eating disorders are seen in about 60% of figure skating and soccer athletes (Jonnalagadda et al., 2004; Calhoun et al; Goutterbarge et al., 2015). Approximately 23.6% of handball players report clinical anxiety symptoms and 17.9% report clinical depression symptoms, with the latter symptoms being experienced by 15.6% of baseball players as well (Jorundsdottir, 2017; Proctor & Boan-Lenzo, 2010). Also, 9% and 1.4% of male soccer players experience symptoms of depression and moderate anxiety disorder respectively (Junge & Federmann, 2015). In rugby players, through a self-report checklist anxiety was the most cited emotion during trainings, and its mean intensity was higher during matches (Nicholls et al., 2006; Nicholls et al., 2009 as cited in Rice et al., 2016). Female soccer players, however, showed a higher prevalence of depressive symptoms with 13% (Junge & Federmann, 2015).

Sport Injuries and Mental health

In team sports, soccer players who sustained an injury the previous year showed a significantly higher risk for depression and a prevalence of 38% in trait anxiety symptoms and depressive symptoms (Guskiewicz et al., 2007; Junge & Federmann., 2015; Goutterbarge et al., 2015). Around 95% of the soccer players' injuries were also associated with distress and sleeping disturbances (Devantier, 2011).

Several psychosocial factors have been suggested as predictors of sport injuries, accounting for as much as 18% of injury variance (Anizu et al., 2003; Sanderson, 1977; Devantier, 2011; Johnson & Ivarsson, 2011; Smith et al., 2000). A predictor of injury among professional soccer players was linked to personality trait with two subscales (1. somatic anxiety, 2. psychic trait anxiety) and negative-life-event stress (e.g. family issues, personal responsibilities, work relationships) that occurred the week prior to the study, accounting for 24% of variance (Ivarsson et al., 2013). Low mental toughness (ability to handle pressure, level of confidence, motivation etc.) is another possible predictor of injuries amongst professional football players (Anizu & Nor, 2006; Anizu et al., 2003; Norris, 1998). History of previous injury and coping with adversity (a difficult or unpleasant situation) were found to be the strongest predictors of injuries in professional male soccer players, accounting for 7% and 11% of the total variance of injury occurrence and days lost due to injury respectively (Devantier, 2011; Gabbe et al., 2006). Freedom from worry and negative sport-specific stress accounted for 17-21% of the variance in injury duration and frequency of professional ballet dancers (Noh et al., 2005).

Basketball and Mental Health

In the case of basketball, it is surprising to note that research on mental health is limited. Relevant findings report a high prevalence of depression. Approximately 50% of professional basketball players experience exhaustion depression at least once during their career, and negative affective states including anger and symptoms of depressive mood remain elevated even during successful team play (Armstrong & VanHeest., 2002 as cited in Markser, 2011; Verma et al., 1978; Hoffman et al., 1999). Elite female basketball players display more negative affect before games played away from home (Szabo et al., 2014). Finally, professional junior basketball players report moderate stress level in the pre-competition phase (Kollos & Tache, 2013).

Basketball Injuries and Mental health

In light of the high prevalence of depression in elite basketball players, it is important to note that injured basketball players, from collegiate to professional level, show high frequency in mental health disorders. In injured student athletes including basketball players, 4.4%-19.8% demonstrate symptoms of depression, and 33.8% symptoms of anxiety (Appaneal et al., 2009; Yang et al., 2015; Roiger et al., 2015). Among 33.2% of student athletes from various sports, including basketball, who reported symptoms of depression, the injured athletes demonstrated more severe depressive symptoms (Cox, 2015; Sartorius, 2015; Tiedens, 2016). Professional basketball players who were absent from their sport for long periods of time due to injuries, were at greater risk of developing symptoms of anxiety, and possibly depression (Halfdanardottir, 2016). Female student athletes from various sports including basketball exhibited higher depressive symptomatology than males (Appaneal et al, 2009; Tiedens, 2016).

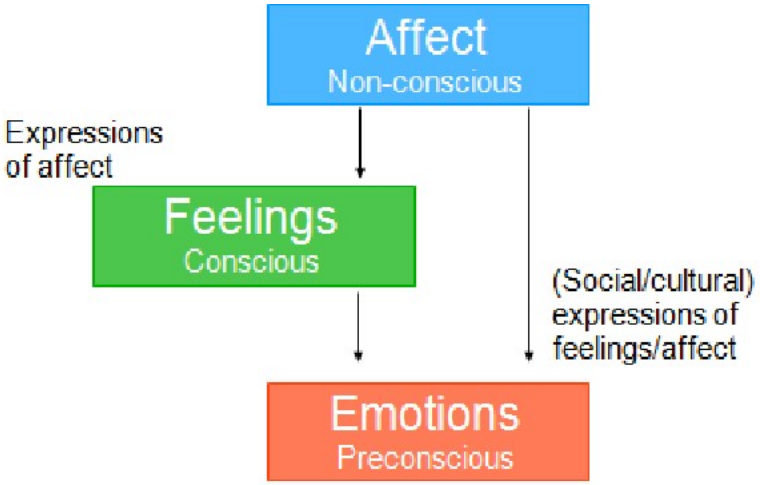
The prevalence of injuries in basketball players of different competitive levels have been found to be 80% during training sessions and 57% during matches (Akodu et al., 2012). Despite this high prevalence of injuries and negative affective states in injured basketball athletes, it is surprising to note that, to our best knowledge, no qualitative study has investigated as to how elite basketball players experience the injury phenomenon. Qualitative studies are considered a valuable source in understanding phenomena for which little is known, through exploring meanings, motives, aspirations, beliefs, values and attitudes that correspond to a deeper space of the phenomena (such as an athletic injury) (Maxwell et al., 2013; Burns & Grove 2009; Holloway & Wheeler, 2002; Creswell et al., 2007; Strauss & Corbin, 1998; Guba & Lincoln, 1994; Neuman, 2011). They provide depth and detail by encouraging people to expand on their responses and explore their own thoughts and feelings (Murray et al., 2009; McLeod, 2019). Therefore, this qualitative study aimed to investigate the experience of affective states in relationship to the injury phenomenon among elite American basketball players in Greece.

Injuries and Mental Health in Team Sports: Qualitative Studies

At this point, a clear definition of the terms ‘affective states’, ‘feelings’ and ‘emotions’, as well as the connection between them is worthy of mention. Affect is generally used to refer to any state that represents how a situation impacts a person and makes external information from the world personally relevant to people, providing them with a first-person experience of the world (Duncan & Barrett, 2007). Cognitive parts of the brain (appraisals) instantiate an affective state, which can be either positive or negative (Duncan & Barrett, 2007; Munezero et al., 2014). Affective state is the higher-order category under which both feelings and emotions of a

conscious experience fall, and has the potential to influence behavior implicitly (Matthis, 2000; Lane & Garfield, 2005; Damasio, 1999; Berridge & Winkielman, 2003; Winkielman et al., 2005). Feelings are universal and correspond to the subjective experience of emotions, which in turn are the projections or display of feelings and can have a more global impact on peoples' behaviors (physiological and behavioural impact) (Friedenberg & Silverman, 2005; Wierzbicka, 1999; Munezero et al., 2014; Shouse, 2005). The determination of an emotion includes a number of factors, which are the following: (a) appraisal (cognition), (b) physiological reactions of the body (e.g. increased heartbeat, sweating), (c) feeling, (d) expressive display (e.g. facial expressions, bodily expressions), (e) readiness to behave in a particular way (action tendencies) (Kleinginna & Kleinginna, 1981; Frijda, 1986). However, it is not certain which factor precedes which, or if all factors are necessary during an emotional experience (Scherer, 2001). Social processes and cultural norms play a significant role in specifying how we express emotions (Calvo & Mello, 2010).

Figure 1. Affect, Feelings, Emotions (extracted from Munezero et al., 2014)



Given the gap in qualitative studies examining affective states in injured elite basketball players, it is important to present findings from seven qualitative studies on various other team sports. The first three qualitative studies examined psychological aspects associated with different stages of injury rehabilitation in professional rugby players (Carson & Polman, 2008; Carson & Polman, 2017; Ruddock-Hudson et al., 2014).

The first study used a mixed-methods approach in six distinct phases of the athletes' injury (Initial Injury, Pre-surgery, Post-surgery, Early Limited Participation, Late Limited Participation, Return to Play). Each phase of the rehabilitation process was split into two general dimensions: 1. Influential Emotions, and 2. Coping Strategies. The initial injury phase was composed of five higher-order themes: Shock, Depression/Frustration, Helplessness, Anger, and Information Gathering. The pre-surgery phase revealed seven themes: Apprehension, Anger, Depression/Frustration, Problem-focused Coping, Emotion-focused Coping, Avoidance Coping, and Social Support. From the post-surgery phase four themes emerged: Relief and Anxiousness, Problem-focused Coping, and Avoidance Coping. The early limited participation phase identified five themes: Encouragement and Apprehension, Goal-setting, Avoidance Coping, and Influence of Previous Injury Knowledge. The late limited participation phase revealed seven themes: Encouragement, Apprehension, Depression/ Frustration, Benefits of Goal-setting, Social Support, Problem-focused Coping, and Avoidance Coping. Lastly, the return-to-play phase was composed of sex themes: Confidence building, Apprehension, Relief, Goal-setting, Problem-focused Coping, and Social Support (Carson & Polman, 2008). Their findings revealed a sequential movement through a series of emotions (shock-depression-relief-

encouragement-confidence building), and highlighted the benefit of problem-focused coping to improve autonomy and confidence (Carson & Polman, 2008).

The second study focused on the Self-determination theory and their analysis was conducted on three distinct phases (Early Limited Participation, Late Limited Participation, and Return to Play) that revealed the following main themes: Positive/ Negative Self-Regulation, Positive/ Negative Locus of Control, Positive/ Negative Physical Ability, Negative Performance Ability, Positive/ Negative Team Interaction, and Positive Medical Interaction. They found that autonomy can assist emotional and behavioral responses, while development of competence can increase self-confidence, during rehabilitation and the return-to-play process (Carson & Polman, 2017).

In the third study (Ruddock-Hudson et al., 2014) authors identified the cognitive appraisals, emotions, and behaviors experienced at three different phases (Reaction to Injury, Reaction to Rehabilitation, and Reaction to Return to Sport). The interviews revealed 14 themes related to emotional reactions to injury, the received support, the challenge of rehabilitation, and the psychological readiness to return to play (Ruddock-Hudson et al., 2014). More specifically, the first phase revealed four themes: (a) injury appraisal resulting in negative emotions, (b) adopting a positive mindset in an attempt to regain control, (c) disengaging from the club while seeking social support, (d) and support received from others. Five dominant themes emerged from the second phase: (a) roller coaster of thoughts and emotions, (b) the challenge of the rehabilitation programs, (c) the challenge of isolation and the need to reconnect, (d) support received from others, and (e) renewed optimism. Lastly, the third phase revealed five themes: (a) mixed emotions, (b) pressure to perform to a high level, (c) support received from others, (d) a positive outcome from the injury experience, and (e) physical and psychological readiness to return to play (Ruddock-Hudson et al.,

2014). Their findings showcase that social support was an important factor in all three phases of rehabilitation and there was a lack of support from the coaching staff (Ruddock-Hudson et al., 2014).

A fourth qualitative study explored the experiences and expectations of professional football and rugby players about the psychosocial aspects of their injury rehabilitation (Arvinen-Barrow et al., 2014). Although these players viewed their injuries as part of their sport, they reported frequent feelings of frustration and self-doubt throughout the rehabilitation process (Arvinen-Barrow et al., 2014). The researchers also identified the role of sport medicine professionals on the injury rehabilitation. For many athletes, that role was related to the physical aspects of the injury and to communication with the sport medicine professionals. Although athletes rarely discussed their personal expectations, emotions, feelings and worries with the sport medicine professionals, all athletes believed that open and honest communication was vital for their recovery process (Arvinen-Barrow et al., 2014). Their results indicate that the most effective sport medicine professionals were able to use subtle interventions to assist athletes in rehabilitation, without making them feel as if they were receiving psychosocial support (Arvinen-Barrow et al., 2014).

Furthermore, a fifth qualitative study on elite rugby players documented the lived experiences of the psychosocial impact of their career-ending injuries (Arvinen-Barrow et al., 2017). The main themes that emerged were: (a) use of profanities, (b) appraisals of injury, (c) injury acceptance, (d) factors influencing injury recovery, (e) coping with post-injury life, and (f) continued impact of injury (Arvinen-Barrow et al., 2017). Their study showed that even though all of the athletes viewed their injury as part of the sport, once they realized it was career-ending it evoked a number of negative appraisals and emotional responses, as well as a loss of identity. In

agreement with the previously mentioned studies, social support was an important way of coping and source of emotional support (Arvinen-Barrow et al., 2017).

In a sixth study, the impact of career-threatening injury on professional hockey players' well-being and career construction were qualitatively investigated (Ronkainen & Ryba, 2017). Emergent themes, such as loss of meaning and loneliness in the face of the injury, were analyzed in relationship to the players' search for authenticity and realignment with self-concept (Ronkainen & Ryba, 2017). The key finding of their study was that injury is a relational rupture and the loss of shared meaning affects athletes' relationships with coaches, managers, teammates, and also family. The researchers found that each player had developed resistant narratives in order to restore their well-being and sense of self (Ronkainen & Ryba, 2017).

A seventh study on elite female football players aimed in understanding the psychosocial features that characterize players who express resilient behavior during injury rehabilitation (Johnson et al., 2016). Three core themes representing psychosocial factors that help players cope with rehabilitation were identified: (a) the constructive communication and rich interaction with significant others, (b) the strong belief in the importance and efficacy of one's own actions, and (c) the ability to set reasonable goals (Johnson et al., 2016). The resilient players appeared to benefit from interacting with important people inside and outside of their sport, from their strong self-efficacy beliefs, which helped them accept their injury in a positive way, as well as from their successful goal-setting (Johnson et al., 2016).

Some commonly identified themes in the above mentioned studies are: negative affective states, social support, type/way of coping, and loss of self or identity. Social support is seen to be an important source of emotional support and a way of coping with the psychosocial impact of sport-related injuries. In addition,

adopting efficient coping strategies, developing resistant narratives, and the use of goal-setting are also shown as effective ways to cope with the negative affective states related to the injury and the different phases of rehabilitation. In agreement, all of the seven studies highlight the negative emotional impact that the injuries have on the athletes and thus the importance of conducting more qualitative studies about this phenomenon.

METHODS

Design

Qualitative research is endlessly creative and interpretive (McLeod, 2019). It is a systematic and subjective approach to highlight and explain daily life experiences and to further give them meaning through the eyes of the affected individuals (Denzin & Lincoln, 1994; McLeod, 2019; Burns & Grove, 2009). It allows researchers to deeply explore behaviours, different perspectives, and life experiences to discover the complexities of a situation through a holistic framework (Holloway & Wheeler, 2002). Unlike quantitative research, which is used when a theory or hypothesis needs to be confirmed/tested, qualitative research is used to understand concepts, thoughts, experiences, or phenomena, without being based on a pre-existing theory (Coon et al., 2016; Elkatawneh, 2016). However, qualitative research can provide insights into a problem and help develop hypotheses for potential quantitative research (Murray et al., 2009). It can play an important role in suggesting possible relationships, causes, effects and dynamic processes (McLeod, 2019).

Quantitative data collection methods are much more structured than qualitative, and they include surveys, experiments, observations, and content analysis

(Elkatawneh, 2016). In contrast, qualitative data collection uses a variety of unstructured or semi-structured methods (McLeod, 2019). Some common qualitative research methods include focus groups, in-depth interviews, case studies, participants' observation, and literature reviews (Denzin & Lincoln, 1994; Elkatawneh, 2016; Yilmaz, 2013). Qualitative research is concerned with aspects of reality that cannot be quantified, focusing on the understanding of attitudes, opinions and behaviours (Queiros et al., 2017; Atieno, 2009). On the contrary, quantitative research uses measurable data to formulate facts and quantifies a problem by generating numerical data or data that can be transformed into numeric statistics (Queiros et al., 2017; Martin & Bridgmon, 2012; Coon et al., 2016). Various techniques can be used to analyze qualitative data, such as content analysis, grounded theory (Glaser & Strauss, 1967), thematic analysis (Braun & Clarke, 2006), discourse analysis, or interpretative phenomenological analysis.

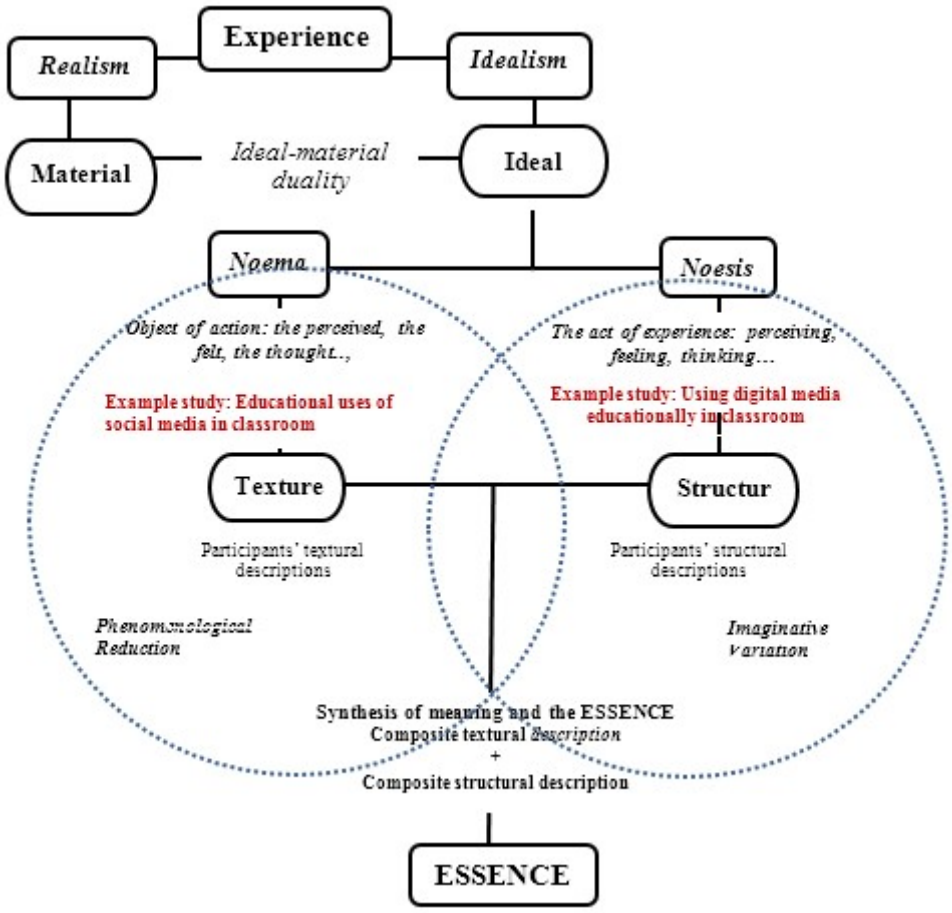
Phenomenology

The qualitative research approach best suited for the current study is phenomenology, as it attempts to understand the essence of a phenomenon through a detailed examination of the participant's personal world (Christensen et al, 2010). The phenomenological approach aims to develop a complete, accurate, clear and articulate description and understanding of a particular human experience, as it is experienced by the person themselves (Jones, 2010; Reid et al., 2005; Arvinen-Barrow et al., 2014; Bentz & Shapiro, 1998). It allows findings to emerge, rather than being imposed by the investigator (Reid et al., 2005; Cameron et al., 2001). Phenomenological research is powerful for understanding experiences and their meanings, and exploring their original context and process of unfoldment (Husserl, 1971). It is particularly effective

at bringing to the fore the experiences and perceptions of individuals from their own perspectives, and gaining insight into people's motivations and actions. More specifically, the researcher seeks to describe the phenomena in rich detail, illuminating the lived experiences of the participants as reported by them (Percy et al., 2015). Through those descriptions, the researcher aims to apprehend the structure of the phenomenon under investigation, as it appears in the consciousness of the participants (Percy et al., 2015). By bringing to light these structures of experiences, the researcher then investigates the foundations of the phenomenon, seeking to finally know possible ways of perceiving all such phenomena (Percy et al., 2015). The task of the phenomenological researcher is to investigate the process of intuition, reflection, and description with which the participants experience the phenomenon (Percy et al., 2015).

Phenomenological research is a powerful means of exploring personal experiences as complex as emotions and mood states, and has been recognized as a useful, often potent, means of understanding sport and exercise experiences, by presenting the opportunity to gain insight into the lived worlds of athletes that would otherwise be unattainable (Spillman, 2006; Dale, 1996; Fahlberg et al., 1992; Kerry & Armour, 2000). Phenomenology includes different philosophies consisting of transcendental, existential, and hermeneutic theories (Cilesiz, 2010). Transcendental philosophy is connected with being able to go outside of the experience, and 'view the world from above', existential philosophy reflects a need to focus on our lived experience and hermeneutic phenomenology emphasizes interpretation as opposed to just description (Ihde, 1986; Langdridge, 2007).

Figure 2. The Phenomenological Concept of Experience (extracted from Yuksel & Yidirim, 2015).



Interpretive Phenomenological Analysis (IPA)

Interpretive Phenomenological Analysis **(**IPA) is the type of phenomenological research approach chosen for the current study. IPA is concerned with the detailed examination of a human lived experience and the meaning this experience holds for the individual (Smith et al, 2009). It wishes to explore the individual's personal perception of an event by allowing them to be the expert of their own thoughts, perceptions, and feelings through telling their stories of a particular phenomenon (Reid et al., 2005; Arvinen-Barrow et al., 2014). IPA is interpretative,

interpersonal, and interactive in nature (Alase, 2017). It draws from hermeneutics, which is the theory of interpretation and understanding of texts, and is influenced by symbolic interactionism (Reid et al., 2005; Arvinen-Barrow et al., 2014). In the latter, the meanings that are assigned to events by the individual are a central part of the process of understanding, and are only realized through a process of social engagement and interpretation (Reid et al., 2005; Arvinen-Barrow et al., 2014). In its entirety, IPA is inductive, with no pre-existing hypothesis (Reid et al., 2005; Arvinen-Barrow et al., 2014). It is also idiographic in that it emphasises detailed and in-depth examinations of how individuals in their unique contexts make sense of a given phenomenon (Reid et al., 2005; Arvinen-Barrow et al., 2014). It aims to conduct this examination in a way which as far as possible enables the experience to be expressed in its own terms, rather than according to predefined category systems (Alase, 2017). This is what makes IPA phenomenological.

IPA seeks to learn from each participant's individual story, and through a deep individualised analysis, a more informative understanding of participants' thoughts, beliefs and behaviours is attainable (Reid et al., 2005; Arvinen-Barrow et al., 2014). Each individual case is central to IPA research; the investigator seeks to understand as much as possible about each respective case before progressing to the next (Cassidy et al., 2011). IPA remains faithful to the individual, illustrating both the life world of respondents who have recounted their experiences, and elucidating how they align with more general themes (Smith & Eatough, 2006).The most important aspect of IPA is its ability to make sense of the 'lived experiences' of the participants and truly allow the study to explore the phenomenon under investigation (Alase, 2017). A qualitative approach like IPA is equipped with all the necessary tools and mechanisms needed to conduct a rich and 'thick descriptive' research study (Alase, 2017).

In IPA, the researcher is making sense of the participant, who is making sense of the experienced phenomenon (Alase, 2017). IPA invites participants to offer a rich, detailed, first person account of their experiences (Smith et al., 2009). It is very important that the research participants have an opportunity to share their 'lived experience' stories without fear of distortions or prosecutions (Alase, 2017). The aim of the researcher is to understand the underlying dynamics of the experience of the participant, and to bracket themselves away from the issue, in order to capture the true essence of the phenomenon (Moustakas, 1994). IPA researchers seek to generate a purposive, fairly homogeneous sample; this ensures the study holds relevance and personal significance to respondents, and enables the researchers to capture details on a specific group of individuals who have experienced a particular phenomenon. The specificity of the sample is dependent upon the phenomena under investigation (Reid et al., 2005; Arvinen-Barrow et al., 2014). Researchers who familiarize themselves with it will be able to produce more consistent, sophisticated and nuanced analysis (Alase, 2017).

Interview guide

Phenomenological interviews are open-ended, unstructured or semi-structured, and designed to create a conversation or discourse investigating the experience interest (Czech et al., 2004; Johnson, 1998; Leno, 2007; Polkinghorne, 1989). The role of the researcher is to encourage self-reflection by the participant and to seek clarifications when necessary (Czech et al., 2004; Johnson, 1998; Polkinghorne, 1989). The goal of the phenomenological interview is to illuminate the central themes of the lived experience under investigation (Jones, 2010). The establishment of a good level of rapport and empathy is critical to gaining depth of information, particularly when

investigating issues where the participant has a strong personal stake (Moustakas, 1994; Hycner, 1985). Phenomenological interviews require a conscious attempt of the researcher to 'reduce' bias by continually setting aside preconceptions or everyday beliefs and looking anew at the things themselves (Percy et al., 2015; Eddles-Hirsch, 2015). This is achieved through the phenomenological process of 'epoche', or also known as 'bracketing' (Eddles-Hirsch, 2015). The strength of the phenomenological interview method is that it allows the participant, not the researcher, to be the expert on the subject (Dale, 2000). This is essential in phenomenological interviewing because only the participant has the ability to describe the phenomenon, as they are the one who has lived it (Jones, 2010).

Participants

A phenomenological framework requires a relatively homogenous group of participants (Creswell et al., 2007). The purpose of phenomenological research is to describe the fundamental structure of an experience, not the statistical characteristics of the individuals in the group under study (Jones, 2010). Therefore, participants are not chosen randomly to achieve statistical generalization, but are purposefully selected due to their significant and meaningful experiences with a given phenomenon (Czech et al., 2004; Dale, 1996; Cresswell, 2007; Moustakas, 1994). Ideally, these participants are able to richly describe their experiences, providing varying accounts of a particular phenomenon that when taken as a whole will create an understanding of the lived experience under investigation (Polkinghome, 1989). Creswell (1998) also recommends "long interviews with up to 10 people" for a phenomenological study. Thus, the participants in this study were purposefully selected with a number of specific criteria.

The first inclusion criterion in the current study was being a male American professional basketball player, who at the time of the injury was competing for the A1 Greek Basketball League. The choice of foreign basketball players was in order to also investigate migration issues that might have been linked with their injury experiences. American basketball players are the most common foreign athletes in Greece, thus it was the best choice of foreign participants of the same ethnicity for this study. This criterion ensured that all participants fit the sporting classification and specialisation of the study. The second criterion was the experience of a sport-related injury, which in terms of severity required medical attention and rehabilitation. This allowed the researcher to analyze the affective states that were related to the injuries of the athletes and their rehabilitation process. In total, 30 American professional basketball players from various teams in the A1 Greek Basketball league were contacted. Five of them met the criteria for the study and were available and willing to participate. Their age range was from 26-30 years (M= 28, SD= 1.58) with height and weight mean values of 198.4cm (SD= 6.91) and 96.8kg (SD= 16.30), respectively. Their body mass index was raging from 21.48-27.15 (M= 24.44, SD= 2.57). All of the participants have been playing professional basketball for 4-6 years (M= 5.4, SD= .89) and recently had a light to moderate injury that required medical attention/rehabilitation.

Player 1. Player 1 is 29 years old from USA. At the time of his injury he was playing in the A1 Greek Basketball League as a forward. The injury was bothering him since the beginning of season 2018-2019, but became worse during a practice in January of 2019. His injury was diagnosed as “osteophytes” and required surgery to fully heal. The athlete decided to have the surgery during the off-season and thus continued

playing. Since his injury still allowed him to play, he did not have to take any time off from the sport; however he had to do rehabilitation in order to maintain and continue playing until the end of the season. This was the athlete's first major injury.

Player 2. Player 2 is a 27 year old professional basketball player from USA. At the time of his injury he was competing for the A1 Greek Basketball League as a point guard. His injury was diagnosed as a "herniated disc in the back" and happened in a game at the beginning of the season (October). It was the third time he experienced the same injury and this time he had to be absent from the sport for one month, while doing rehabilitation.

Player 3. Player 3 is 28 years old from the USA. His injury happened in a game during the playoffs of 2016-2017 when he was playing for the A1 Greek Basketball league as a power forward and center. His injury was identified as an ankle sprain, which required rehabilitation. The athlete played in the game a week after his injury, but then he was absent from the sport for 3-4 weeks. He started his rehabilitation the day after his injury and continued until the playoffs (end of April). The athlete had gone through a broken foot injury the year before.

Player 4. Player 4 is a 30 year old professional basketball player from America. He competed for the A1 Greek Basketball league for the season 2018-2019 as a shooting guard. His injury happened in a game 3 months after the season started (December) and it was a friction in a muscle underneath his Achilles. He had to stay absent from the sport for one month, but he continued playing, while getting rehabilitation. He

decided to stop the rehabilitation process three weeks later, and played until the end of the season. This was the first major injury for the athlete.

Player 5. Player 5 is a 26 year old American professional basketball player. For the season 2018-2019 he played for the A1 Greek Basketball League as a small forward/ shooting guard. The athlete was feeling pain in his knee since the preseason (early September) until it got worse a couple months later. His injury was diagnosed as a Medial Collateral Ligament (MCL) injury and would require surgery to be able to fully heal. The athlete continued playing with his injury while getting rehabilitation in order to be able to finish the season. He had experienced injuries before, such as Achilles injury, right shoulder injury and right foot injury, but this one was the most affective for him.

Data Collection

This research was granted ethical approval by the University of Thessaly Ethics Committee. Participants who met the inclusion criteria were contacted via social platforms, such as Facebook, instagram and whats app, and invited to take part in the study. A pilot interview was conducted, prior to the participant interviews, with an American professional basketball player who met the criteria necessary for the current study. The interview lasted for about 30 minutes, was transcribed verbatim, and was then analyzed. The pilot interview was an opportunity for the researcher to practice developing follow-up questions and to determine if the order of the questions flowed well. Therefore, questions were revised, reworded, added, and their order was modified. After reading a briefing but comprehensive text regarding the research and its aims, athletes participated in a one-on-one open-ended, semi-structured interview

through Skype. Interviews were arranged at a mutually convenient time as some of the athletes were already in the USA and there was a time-difference. The participants were informed that they did not have to answer any questions they were uncomfortable with and they could withdraw from the interview at any time. Furthermore, they were informed that their data would only be used for research purposes, and that pseudonyms would be used to ensure their confidentiality.

In this phenomenological study, the major data gathering method involves primarily in-depth interviews with participants (Creswell et al., 2007). The participants' demographic information was collected, including name, age, nationality, height/weight, status (married, single, kids etc.), education, team, basketball position and years of professional experience. In accordance with prior phenomenological research, the participant interviews were semi-structured and started with an open-ended prompt in order to guide the direction of the interview: "Tell me a little bit about your injury". The interview questions were divided in 3 main parts: (1) Injury (I. Occurrence and Diagnosis, II. Migration Issues related to injury), (2) Treatment and Return to Sport, (3) Importance of Sport. A main component of the questions across the 3 parts of the interview referred to the psychological affective states related to the injury and the social support received during different phases of the injury-rehabilitation process. Follow-up questions were asked in order to clarify and enrich the interview as well as confirm the precision of the data: "How was that for you?", "In what way?". The format of the interviews resembled a natural conversation, and the dialogue was set primarily by the participant (Dale, 1996; Polkinghorne, 1989).

Although the interviews followed the topic guidelines, the researcher was free to deviate from the guide when necessary, to ensure that both parties had an opportunity to expand on issues they felt important. The duration of the interviews

and the number of questions varied from one participant to the other. The 5 interviews ranged from 40 minutes to 1 hour and 40 minutes in length (M= 74, SD= 24.08) and were recorded through Skype after getting approval from the participants. The average length of time between the day of the injury and the day of the interview was 8.4 months (SD= 7.13). Each interview was transcribed verbatim and all names and other identifying information were changed or removed in order to protect the participants' privacy. Transcripts were returned to the participants in order to be checked for errors, omissions, or corrections and ensure the validity of the data.

Data Analysis

All interviews in the current study were transcribed verbatim with a total of 122 single spaced typed pages. The interview audio/video recordings and transcripts were stored on the author's personal laptop with a back-up on an external hard drive, both password protected. The transcripts were analyzed by hand and coded manually by the author. Following the IPA procedures described by Smith et al (1999), an in-depth familiarization of the data was firstly conducted by reading and re-reading the transcripts (Pietkiewicz & Smith, 2014; Alase, 2017; Morley et al, 2017). The aim was to explore how participants made sense of their experiences and their existential concerns (Spiers & Riley, 2019). According to Pietkiewicz and Smith (2014), each reading may provide some new insights. Then, all interviews were summarized and commented upon in a different 'Microsoft Office Word' document, highlighting the initial important parts of each interview (Groenewald, 2004). Based on Alase (2017), this can help the researcher narrow down (condense) the words or sentences in a transcript.

All interview transcripts were printed and starting from the first interview, the left-hand margin was used to annotate initial thoughts and possible codes through significant words/sentences/phrases in the transcript (Pietkiewicz & Smith, 2014; Smith et al., 1999). Preliminary interpretations, similarities, differences, and contradictions were noted within the participants' sayings (Smith et al., 1999). Many codes related to large parts of the interview extracts and some were more specific, referring to one or two sentences. This is a critical phase of explicating the data, in that those statements that are seen to illuminate the researched phenomenon are extracted or 'isolated' (Creswell, 1998; Holloway, 1997; Hycner, 1999). According to Moustakas (1994), the list of units of relevant meaning (codes) extracted from each interview is carefully scrutinised and the clearly redundant units eliminated. Moustakas (1994) recommended that the researcher asks themselves the following two questions in regards to the codes: 1) "Does it contain a moment of the experience that is necessary and sufficient constituent for understanding it?" and 2) "Is it possible to abstract and label it?".

Creswell (2013) and Moustakas (1994) suggested that after this step, the researcher groups the codes into larger units of information called 'meaning units' or 'themes'. Meaning units/themes are the words or statements that relate to the same 'core essence' of the lived experiences of participants, according to Graneheim and Lundman (2004). Thus, after the whole transcript was coded, the codes were examined in order to see if they could be grouped together into themes (Pietkiewicz & Smith, 2014; Percy et al., 2015; Creswell, 1998; King, 1994; Moustakas, 1994). Based on Hycner (1999), by interrogating the meaning of the various codes, central themes are determined, which express the essence of these codes. Following Smith & Osborn (2008), the themes were listed on a separate sheet and connections were found

between them. Themes were revised, reworded and added. Some themes were marked as the ‘main themes’ and others as sub-themes (Hycner, 1999). According to Groenewald (2004), care must be taken not to cluster common themes if significant differences exist. The unique or minority voices are important counterpoints to bring out regarding the phenomenon researched (Groenewald, 2004).

The next interview transcripts followed the same pattern. Based on Smith et al (1999), the theme list from the first interview transcript was used, in order to identify connections between the different transcripts, while also being open to new arising themes. As the process through each transcript continued following the interpretative approach, a final list of themes and subthemes emerged. Although the primary concern was the personal perceptions and understandings of phenomena, a few themes were identified as mutually relevant to all participants (Smith et al., 1999). This allowed for a more detailed analysis, where personally distinct experiences were also considered. Even though there was an identification of shared themes across participants’, a lot of time was spent into analyzing each individual transcript. Shared themes were achieved by collecting all previously identified themes in each transcript, in order to explore patterns and relationships between the interviews, and seeing how different themes could come together to help understand further the participants’ experiences (Percy et al., 2015; Groenewald, 2004; Reid et al, 2005). The transcripts were read multiple times to make sure there weren’t any more possible themes emerging from the transcripts that had been omitted. Based on Noon (2018), the aim was to keep descriptions as faithful as possible to the experiential raw data and being mindful not to delete from, add to, change, or distort anything originally present in the initial “meaning units” of the participant transcripts.

RESULTS

Although each participant's experience was unique, similarities were found in their experiences of their injuries. Analysis of the interview transcripts yielded 14 central themes between 4 main phases of the injury experience: 1. Before Injury Occurrence, 2. Reaction to Injury, 3. Role of Rehabilitation, 4. Returning to Sport. The first phase, 'Before Injury Occurrence', revealed two themes related to Issues with the Team and the athletes' Psychological State. Possible connection between the two themes is also discussed. Four themes emerged from the second phase of Reaction to Injury. Those themes were related with Negative Thoughts and Feelings, Affective States at the stage of Diagnosis, Coping with Negative Thoughts and Feelings, Seeking and Receiving Support. The third phase, Role of Rehabilitation, brought to light four themes, which were identified as Fluctuating Emotions, Loss of Self and Self-doubts, Relationship with Medical Staff, Seeking and Receiving Support. Lastly, four themes unfolded from the phase of Returning to Sport. Those themes represent athletes' Reaction to Return to Play, their Athletic Identity and Love for the Game, the Positive Outcome of the injury, and Life after Basketball. Differences or contradictions between the athletes are also highlighted in the findings.

Phase 1- Before Injury Occurrence

Two themes emerged that represent the 'Before Injury Occurrence' phase: (a) Issues with the Team, (b) Psychological State. All participants were found to have experienced issues in their teams including late payments, personality of the coach or coaching style, and non-success in the team. Some of those factors might possibly be related with athletes' negative affective state for the period before their injury occurrence.

a. Issues with the Team

A very common issue for all five participants in the study was the late payments. Some examples from the participants sayings are: “I was going to go home [because] I didn’t come halfway across the world to play basketball for free”, “Not getting our money on time […] was rough”. The personality of the coach and the coaching style were also reported as issues. For example, “Sometimes we’re just out there free-styling [because] there is no plan”, “[Coach] was a very difficult person to cooperate with”, “He was trash talking me all the time”. An additional factor was the success in the team before the injury occurrence. As an example, “[The season] has been very bad for us, we played horrible”, “The season wasn’t going well. We didn’t have any leaders, no management, our coach got fired”. Minor life event stress, such as daily hassles and everyday problems, has been implicated in the relationship between accumulative small stressors and sport injury occurrence (Wiese-Bjornstal, 2010; Ivarsson et al., 2013). This is connected to the next theme that describes the psychological state of the athletes before the injury occurrence.

b. Psychological State (Thoughts and Feelings)

Common feelings of the athletes at the beginning of the season were excitement and motivation. However, the above mentioned issues in their teams possibly contributed in athletes’ negative affective states for the time before the injury occurrence. Taken from their own words, some examples are: “It was hard to improve as a basketball player in the circumstances we were in”, “It was very difficult [and] it affected everybody [on the team]”, “We didn’t have the motivation [to practice] and get better every day”, “It [was] a hard situation [because] [there were] too many

problems", "Everyone gets frustrated because sometimes we're on different pages", "There was a lot of frustration between the team [because] there was no balance". The coach has also been suggested as a possible stress factor for the athletes (Johnson & Ivarsson, 2011; Roderick et al., 2000). In regards to the relationship with his coach, one of the athletes stated: "I wanted to prove [coach] wrong, [so] I was playing with anger [and] I didn't enjoy it". "My confidence wasn't where it usually is", he also added. Lastly, one of the participants stated that his mood was down and not where it needed to be. "It wasn't the way I wanted to play", he said. This phrase possibly explains why he did not care about practicing anymore, but just wanted to compete, win and make a good impression. Based on Gould and Weinberg (2000), psychological factors can influence the occurrence of an injury (Anizu et al., 2003). More specifically, pre-injury negative mood is related to increased injury occurrence (Smith et al., 1997; Heniff, 1998; Wiese-Bjornstal, 2010) and frustration or anger may contribute to athletes injuring themselves (Pensgaard et al., 2018; Wiese-Bjornstal, 2009; Gould et al., 2002).

Two athletes (40%) in the study were experiencing limitations in their physical abilities as a result of pain and discomfort, however they continued practicing and playing normally. Pain symptoms can appear gradually, thus athletes persist in training routines and game playing, which can lead to an overuse injury that evolved over time (Clarsen et al., 2013). Overuse injuries are the result of repeated micro-trauma with no single, identifiable cause, and are less dependent on cognitive processing but more related to physiological processes affecting training adaptation and recovery (Pensgaard et al., 2018; Fuller et al., 2006). Communication problems between the athlete and the coach are important risk factors for overuse injuries (Pensgaard et al., 2018; Van Wilgen & Verhagen, 2012; Eklund & Defreese, 2017).

One of the two athletes (20%) specifically mentioned that his coach's negative comments made him think "I'm trash". "I took it too personally because I was feeling that way", he added.

Phase 2- Reaction to Injury

Four themes emerged from the 'Reaction to Injury' phase: (a) Negative Thoughts and Feelings, (b) Affective States at the stage of Diagnosis, (c) Coping with Negative Thoughts and Feelings, (d) Seeking and Receiving Support. All participants reported a number of negative thoughts and feelings with the occurrence of their injuries (Ruddock-Hudson et al., 2014). Some of them, however, experienced more positive emotions with the diagnosis of the injury. All participants were found to have used some type of coping in order to deal with their negative emotions. In agreement with previous studies, social support was found to be a factor that helped athletes in coping with the negative affective states caused by their injuries.

a. Negative Thoughts and Feelings

Previous studies have highlighted the various negative thoughts and feelings that athletes experience with the occurrence of an injury (Clement et al., 2015; Ruddock-Hudson et al., 2014; McDonald & Hardy, 1990). The injury itself became another stressor in the athletes' lives leading to process cycles of thoughts, feelings and actions (Wiese-Bjornstal, 2010). Athlete's initial appraisals of the injury were influenced by the perceived severity of their injuries (Clement et al., 2015). According to a previous study, the more the athletes perceived their injury to be severe or expected to be away from their sport for a significant period of time, the more negative their appraisals were and vice versa (Clement et al., 2015). This is clearly

shown by one of our participant's statements: "I was almost crying just thinking 'Dang! I will be out another 6 months because of a broken foot'".

One commonly reported emotion amongst the participants was 'worry'. For example, "I was a little worried", "I was just worried about making sure I didn't break my foot", "I was really worried". Participants also reported to be 'scared and nervous'. One specific participant stated: "I was almost crying. I was screaming". Another one said: "I instantly started praying, because I thought I tore something in my knee". Shock and frustration were also reported by one athlete: "It was very mind-blowing, difficult and frustrating". Another one explained his emotions in that way: "It was strange to not have the desire to push through pain".

Interestingly enough, one of the participants mentioned that he did not want to believe it and he chose to ignore it and keep playing until he couldn't walk anymore. This is in support of previous findings where athletes showed disbelief as an initial response to the injury (Evans & Hardy, 2002; Grove et al., 1998; Johnston & Carroll, 1998). Similar findings suggest that athletes may adapt a sport culture of ignoring pain and injury in quests for impression management (e.g. displaying toughness or earning respect) and performance success (e.g. a willingness to do whatever it takes to win, including sacrificing health) (Wiese-Bjornstal, 2010). However, after the athlete realized that his injury was more serious than he originally perceived it to be, he felt 'nervous and concerned', thinking that 'injuries can change your career'.

b. Affective States at the stage of Diagnosis

Once the injury was formally diagnosed, athletes reported changes in their affective states and appraisals (Clement et al., 2015). Three of the participants (60%) experienced negative emotions during the diagnosis and two of them (40%)

experienced positive ones. Examples of positive affective states are: “I was happy for the information [because] I knew what [was] going on”, “I felt relieved [and] happy knowing I didn’t break anything”. The participants who had negative affective states of the diagnosis reported feelings of frustration and sadness (Tracey, 2003). For example, “It was frustrating because this was the third time it’s happening. To have it happen again, it really hurt”, “Why did I have to get injured right now? What is this going to teach me?”, “This is bullshit”, “My heart just stopped”, “I’ve been feeling pain all my life. I want to finally just play and be healthy”. It seems like the athletes that perceived their injuries as more serious in the initial phase, had a positive appraisal of the diagnosis. On the other hand, athletes who perceived their injuries as less serious originally, showed a negative appraisal of the diagnosis.

During the time between the diagnosis and before the start of rehabilitation athletes also reported negative affective states. One participant (20%) expressed pitying themselves, which supports previous findings were the participant reported feeling sorry for themselves (Tracey, 2003). In a study by Carson & Polman (2008), anger, helplessness and uselessness were all compounded by the athlete’s loss of independence and needing others’ help in order to do simple, everyday things. This is also shown in one athlete (20%) in the current study, where he said: “The first four-five days, it really was frustrating. I couldn’t do everyday things that you’re so used to and you take for granted. I couldn’t put my shoes on myself, I couldn’t put my socks on. I could barely even take a shower by myself. My brother had to come [from America] and help me do everything. That was definitely really, really tough”. Recovering from the negative appraisals of an injury can be affected by the athletes’ personality, history of stressors, and coping strategies or mechanisms (Van der Does

et al., 2017). Athletes' coping strategies in regards to their negative thoughts and feelings will be discussed next.

c. Coping with Negative Thoughts and Feelings

Thoughts and feelings mentioned above are commonly experienced by athletes responding to an injury (Brewer, 2001), and while they are generally the most intense immediately following injury, they decrease over time and are typically replaced by more positive emotions (Quackenbush & Crossman, 1994). Despite struggling with their negative emotions and other issues affecting their enjoyment of sport, athletes' tried to find ways to cope with them (Jones, 2010) by turning their negative thoughts into positive ones and using goal-setting (Ruddock-Hudson et al., 2014; Tracey, 2003). For example: "[I tried] to focus on the positives, keep pushing and looking forward", "I had to stay strong-minded, positive and kept moving forward", "[I] went quickly from [pitying myself] to [trying] to figure things out", "I'm [always] going to make a goal of some kind [for my] self-improvement". More specifically, one athlete said: "I [changed] my perspective [so] that I [wouldn't] fall apart". This was demonstrated through their self-motivation (Mazur & LaSage, 2017) and drive as well, which also helped athletes cope with the situation and move forward. As examples: "I kept that motivation and what I was doing this for", "There [was] no way I [was] going to stop", "This wasn't going to be the end".

The injury was also recognized as a challenge by one of the participants, which is in agreement with previous findings (Tracey, 2003). As an example: "[I took] it as a challenge, as an opportunity". A number of studies suggest that perceiving injury as an opportunity for growth is related to a successful rehabilitation as well (Ford et al., 2000; Tracey, 2003; Podlog & Eklund, 2006; Wadey et al., 2011;

Clement et al., 2015). Another way of coping for one of the athletes involved him watching his highlights to remind him what he is capable of. Personality aspects, such as perfectionism and self-esteem, can be helpful to explain coping (Koivula et al., 2005; Vallerand, 2007; Roessler et al., 2015). In the current study, all athletes seemed to have increased confidence and self-efficacy in their abilities as basketball players.

An athlete's desire to distance themselves from the difficult situation has also been found as a way of coping in injured athletes (Jones, 2010). One athlete in the current study stated that he started going out more because he didn't want to 'sit around and be angry' about his injury. Taking part in alternate activities can be a behavioural response for athletes to keep their mind occupied and away from their injury (Ruddock-Hudson et al., 2014). Avoidance coping strategies have been used by athletes as a way to prevent uncontrollable negative situations, such as an injury, from dominating their lives (Carson & Polman, 2008). Avoidance coping strategies are suggested as being both facilitative and also debilitative (Gallagher & Gardner, 2007; Mankad et al., 2009; Carson & Polman, 2010). Furthermore, social support can be critical to an athlete's ability to cope with their injuries (Roiger et al., 2015; Tomberg et al., 2007) and will be discussed next.

d. Seeking and Receiving Support

Social support is another way of coping that was found to be an important source of emotional support for athletes who experience an injury and can influence their injury response (Clemet & Arvinen-Barrow, 2015; Wiese-Bjornstal et al., 1998; Ruddock-Hudson et al., 2014; Carson & Polman, 2008). Social support can be essential between all phases of an athletic injury. Family members, friends and significant others (e.g. wife, girlfriend) were an important source of support for the

athletes (Ruddock-Hudson et al., 2014). For example, “My brother came and stayed with me [and] helped me do everything”, “A lot of people who were close to me knew”, “I called my mom once I got to my phone”, “I was getting positive reassurance from my wife, my [friends] and my brother”, “The biggest [source of support] was my dad”. During this phase, all athletes reflected on support, the genuine concern, and communication from their teammates as well (Ruddock-Hudson et al., 2014). As an example, “I told [name of teammate] because he could relate the most [and] he is the most professional”, “All of my teammates [were] checking in on me”, “They [were] giving words of encouragement [and] they gave me more confidence”.

Less social support was received from the coaching staff, which is in agreement with previous studies (Granito, 2002; Tiedens, 2016). “I don’t even know if [coach] knows”, stated one athlete in regards to his injury. Similar examples are: “[Coach] was mad [because] they really needed me for that game”, “I didn’t like how things were being handled [by coach]”. More specifically, one of the athletes stated that his coach told him to “just keep playing”. The athlete didn’t like his coach’s approach but he understood it because he knows how things ‘work in basketball’. However, “If you care about your player, he should have said ‘you should have your surgery’”, the athlete added. Findings from another study indicate that even though social support from the coach is helpful, it does not appear to be the most desired form of social support for the athletes (Tiedens, 2016).

Phase 3- Role of Rehabilitation

Four themes emerged from the ‘Role of Rehabilitation’ phase: (a) Fluctuating Emotions, (b) Loss of Self and Self-doubts, (c) Relationship with Medical Staff, (d) Seeking and Receiving Support. Athletes reported a variety of emotions during the

rehabilitation process. Their emotions differed from the beginning of rehabilitation, to the middle part, and the part before returning to play. Additionally to their fluctuation of emotions, athletes appeared to experience a 'loss of self' as well as self-doubts about themselves and their abilities. Even though athletes usually don't seek psychological support from the medical staff, it can play a significant role in helping athletes cope with the fluctuating emotions, loss of self, and self-doubts. Social support is thus, as important at this stage as it is at the initial phase of the injury.

a. Fluctuating Emotions

Three of the athletes (60%) in the study decided to continue playing with their injuries, because they felt capable to cope and push through the pain, while getting rehabilitation. The normative culture of high-intensity sport is such that athletes learn through socialization experiences into the normative ethos of sport that the expectation is for them to be "tough" and play through pain and injury (Wiese-Bjornstal, 2010; Mankad et al., 2009; Anderson et al., 2008). It has been suggested that pain tolerance results in greater adherence (Byerly, Worrell, Gahimer, & Domholdt, 1994; Fields, Murphey, Horodyski, & Stopka, 1995) but also appears to be moderated by mental toughness (Levy, Polman, Clough, Marchant, & Earle, 2006). A common statement from three athletes was that they got used to playing with pain. For example, "60% of the season [I was playing] with pain", "I did my best to figure out how to manage the pain and deal with it", "I got used to playing with the injury", "I got used to feeling a certain kind of pain". Playing through pain and injury has been the subject of study in a variety of high-intensity sports, such as gymnastics and rowing (Nippert, 2005; Pike & Maguire, 2003).

During rehabilitation athletes illustrated a fluctuation of affective states (Ruddock-Hudson et al., 2014; Tracey, 2003). Athletes' emotions varied from the initial part of rehabilitation, to the middle part and the end of it. Most athletes in the current study showed motivation in the beginning of their rehabilitation. Some examples are: "I was so excited at first", "I was happy, it felt like a relief", "I was really happy [and] motivated to get up [and] do something", "I was motivated [and] really happy", "I was extremely motivated". This comes to disagreement with previous findings which suggest that the physical limitations caused by an injury, not only reduce an athlete's physical performance, but also increase the stress and anxiety levels for the rehabilitation (Moreira et al., 2016).

Frustration during the middle part was mostly related with the progress slowing down and athletes getting fed up of being in therapy for too long, thus wanting to get back to normal as fast as possible. As examples: "It was frustrating at times [because] the progress was a little slower", "It was definitely some frustrating times [because] progress [was] a little slower", "When you're hurt and you're sitting out, you want to get back as fast as possible", "I was being frustrated of not being healthy", "I would get frustrated with so many hours I was there", "I had gotten frustrated [because] I was there for too long". For another athlete, not being able to play basketball like he wanted to for six weeks, and not being at home with his friends would get really frustrating. Some of his thoughts were: "I'm really over here for nothing. I'm not doing anything". These statements are in agreement with previous studies who have found frustration to be a main emotion for athletes during their rehabilitation (Arvinen-Barrow et al., 2014, Clement et al., 2015; Granito, 2001; Tracey, 2003).

Attending games and not being able to participate was identified as an emotionally difficult experience for the athletes, which influenced their affective states (Tracey, 2003). Athletes characterized this time as 'the worst', because they couldn't get on the court and help their team. The inability to help the team was identified as a leading stressor in a previous study (Madrigal & Gill, 2014). Some examples from the current study are: "I was angry with myself that I [couldn't] go on the court", "It was tough not to be able to be out there and play with the guys", "I'd be frustrated watching the games knowing I could help my team win", "Being injured and not being able to play is one of the worst feelings ever". Feeling 'helpless' due to their inability to play has also been identified in previous studies (Pollio et al., 1997; Carson & Polman, 2008) as well as in the current study. One athlete stated: ""You feel helpless [and] worthless, when you know you can help your team". Athletes also reported of having 'low mood' and decreased self-esteem (Tracey, 2003). Decreased self-esteem was mostly reported by the athletes that continued playing and it was a result of poor performance.

For many athletes, their sport-related frustration can lead them to consider quitting sport in order to alleviate their pain (Jones, 2010). Specifically, one athlete (20%) in the current study stated that his psychological state was down to the point that he wanted to quit and go back home. Taken from his own words: "It was just too much. I was trying to leave but the [team] didn't allow [it]. I was just going to stop playing because it was frustrating".

At the end of rehabilitation most athletes felt excited, because they were one step closer to being "as normal as" before. In a previous study, increased motivation and enjoyment were the most influential emotions for athletes at this phase of rehabilitation (Carson & Polman, 2008). An example from the current study is: "I was

hype [and] really excited at the end of it". This phase was referred to as 'the best part' of rehabilitation from the athlete who had been absent from the sport for 6 weeks. Some of his thoughts were: "I can shoot a basketball again", "I'm almost back". He further stated that being so close to returning made him want to work harder. This is in agreement with previous findings that athletes showed increased motivation and commitment to the rehabilitation at this phase (Carson & Polman, 2008). On the other hand, two athletes (40%) in the study ended their rehabilitation sooner than they should have, even though they were not fully recovered yet. They stated: "I stopped doing it, even when I should've did it longer, because I wanted to get back to my routine before the injury", "I didn't really want to continue this rehab. I [was] going to do it when I needed it".

b. Loss of Self and Self-doubts

Previous studies have also identified a loss of self and self-doubts in athletes that experience an athletic injury (Arvinen-Barrow et al., 2014; Jones, 2010; Ruddock-Hudson et al., 2014; Tracey, 2003). Three of the participants (60%) in the current study continued to play shortly after their injury during their rehabilitation even though they were not 100% recovered. Two of the participants (40%) stayed out of the sport for 4 to 6 weeks and then continued to play for the rest of the basketball season. In that time they revealed experiencing a loss of identity and self-doubts about themselves and their athletic abilities. Similarly to a previous study (Arvinen-Barrow et al., 2014), the feeling of 'not being the same as before the injury' was identified. Examples from this study are: "What if it's never the same again?", "Maybe I'm not moving as fast as before". Other examples of self-doubt are: "I've had many doubts at times", "Am I going to make this 3-point shot?", "[It] would be the worst [to] injure

myself again", "Am I somebody who is not really as good as he thinks?", "I'm sitting here for what?". Specifically, one of the athletes stated: "I was kind of hurt [because] I didn't think that the pain wouldn't allow me to play the way I wanted". Another one mentioned: "You don't really know what you are capable of until you don't have any injuries".

Injuries have also been found to lead to feelings of identity loss (Leno, 2007). Likewise, the athletes in this study revealed a pattern of loss of self, which is evident in the following: "Why don't I feel like myself?", "I'm just not the same", "Am I really who I think I am?", "I wasn't feeling myself 100%", "I lost my swag", "I didn't like who I was becoming, I had to go back to my old self". Their self-doubts and loss of self were often related with a poor performance (Jones, 2010).

c. Relationship with Medical Staff (Physiotherapists, Trainers, Doctors etc.)

The role of the medical staff can be essential in an athlete's injury experience (Granito, 2001). Positive interactions and received support from the medical staff is an integral part of rehabilitation (Ruddock-Hudson et al., 2014). In our study, all athletes reported a great relationship with the physiotherapists, trainers or doctors they were working with. For example, "I felt grateful for them", "I was fortunate to work with a great team of physios", "I [had] support from the foot doctors", "They just want what's bets for me [and] they didn't try to rush me back", "I was really cool with them", "They did a good job to help me get back", "They were very encouraging [and] let me ease my way into running again", "They were my people of there [and] they always showed me love", "They made my time in there very fun. I enjoyed going to treatment", "I really enjoyed how professional they were". One of the athletes however, stated: "They're phenomenal at their job [but] I wasn't looking for that type

of [psychological] support from them". This last statement is in compliance with previous findings that have found athletes to perceive the role of the medical staff to be about the physical aspect of the injury rather than the psychosocial (Arvinen-Barrow et al., 2014). However, recent research highlights the importance of physiotherapists in providing an autonomy-supportive climate within sports injury rehabilitation (Niven, 2007; Carson & Polman, 2008).

d. Seeking and Receiving Support

Social support is a vehicle for enhancing an athlete's well-being (Richman et al., 1989), and those with high levels of social support appear to cope better when rehabilitating from an injury (Cohen & Wills, 1985; Udry, 2001; Wiese et al., 1991). Given the fluctuating emotions, self-doubts and loss of self that athletes experience, social support is a significant factor during this phase as well (Evans & Hardy, 1999; Johnson et al., 2016; Ruddock-Hudson et al., 2014). Family, friends, significant others and teammates remained a valuable source of support for the athletes (Clement et al., 2015; Shelley,1999; Udry et al., 1997; Zimmerman, 1999). Most athletes appreciated the concern expressed from their family, friends and significant others, and felt 'needed' by their teammates (Wiese et al., 1991; Carson & Polman, 2008). For example, "My mom, my girlfriend [and] my teammates were checking in on me everyday making sure I was alright", "My teammates kept encouraging me", "My friend [player another team] was really supportive", "It was good to know your teammates care about you", "My support system is phenomenal", "I'm very thankful", "I got support from some people in [the city] that were always there for me". Trust in the rehabilitation provider, feeling wanted by others, and satisfaction of social support

needs were associated with psychological readiness to return to sport (Podlog et al., 2015).

The majority of the athletes appraised that they received minimal support from their coaches during their rehabilitation or not at all (Ruddock-Hudson et al., 2014). Two athletes (40%) however, reported receiving support from the coaching staff during this phase. As an example, “They were taking their time until I was 100% recovered [and] they were really supportive”, “[Coach] would check on me, asking how I was [and] he definitely cared about my health”, “[Coach] was really supportive [telling me] ‘We need you to be a strong team’”. This finding is important given the impact that coaches can have on the injury rehabilitation process (Bianco & Eklund, 1999; Granito, 1999; Udry et al., 1997).

Phase 4- Returning to Sport

Four themes were identified in the ‘Returning to Sport’ phase: (a) Reaction to Return to Play, (b) Athletic Identity and Love for the Game, (c) Positive Outcome, (d) Life After Basketball. Despite the difficulties athletes had to face as a result of their injuries, and the emotional roller-coaster they had to cope with, they were all eager to return to playing like before. Over the years basketball had become a huge part of their identity, which is evident in their love for the sport and the importance it holds for them. All athletes in the study recognized that their injury experience had a positive or learning outcome and that they are better because of it. It is difficult for them to consider a life without basketball, and most of them would like to stay connected to the sport even after they stop playing.

a. Reaction to Return to Play

Four athletes (80%) in the study returned to play at an earlier stage than initially suggested by the medical staff. An explanation for this can be that athletes with confidence that their bodies can cope with the physical load related to sport participation are more likely to return to sport at an earlier stage (Ivarsson et al., 2017). Returning to participation involved a mixture of affective states for the athletes. This is in agreement with previous studies that found athletes to have both positive (excitement) and negative (nervousness) appraisals of returning to sport (Clement et al., 2015; Ruddock & Hudson et al., 2014; Tracey, 2003). Positive appraisals of athletes included feelings of excitement and happiness. For example: “I was excited for the game”, “I was just happy to be back”, “It was a great feeling”, “It was perfect”. One athlete specifically mentioned that he couldn’t sleep the night before as a result of his excitement. Another one stated that he felt as close to normal as possible and the desire he brought to the game surpassed all his expectations.

On the other hand, athletes reported feeling ‘nervous’ in regards to doing movements that caused the injury in the first place. For example: “I was a little nervous [about] jumping exploding”. One of the athletes that played a week after his injury stated: “I was a little nervous, because you could tell by the way I was running [that] my ankle wasn’t right”. Another athlete expressed his doubts amongst returning to play: “I thought I was going to be extremely slow, I thought I was going to get tired faster”. He also admitted of feeling the ‘stupidest person ever’ the day after, because he was in extreme pain. Unlike previous research (Bianco, Malo, & Orlick, 1999; Gould et al., 1997; Shelley, 1999; Kvist et al., 2005; Tjong et al., 2014; Ardern et al., 2012), a fear of re-injury was not a major cause of concern for the athletes. This can be explained by the fact that the three athletes in the study continued playing shortly

after their injuries, which means that their injuries weren't major, and two of them had already experienced the same injury once or twice before, thus they were fully aware of how to handle it. Previous studies have suggested that athletes use their prior injury experience as a coping strategy and it can be beneficial for them (Carson & Polman, 2008).

b. Athletic Identity and Love for the Game

Previous studies have revealed 'identity' and 'importance of sport' as a main theme of injured athletes (Granito, 2001; Jones, 2010; Madrigal & Gill, 2014). Being an athlete is a major part of participants' identity (Jones, 2010; Ruddock-Hudson et al., 2014). Four athletes (80%) in our study highlighted that through their sayings: "It's directly tied with who I am", "When I'm playing, that is the purest form of who I am [and] my personality", "Basketball allows me to genuinely be myself", "I can actually be a basketball player again", "It's a big part of [my] identity [and] it helped me as a person", "Basketball is a direct correlation to life", "[It] teaches people about themselves [and] about life".

In support of previous studies (Richardson, 2009; Leno, 2007), the love for the game was also evident in this study. All athletes expressed their love for basketball through a common saying: "Ball is Life". Basketball is their 'world' and this is shown in the following: "The round earth is the ball in my universe", "It means the world to me", "Basketball means everything", "Ball is life", "This is my life for real". This is in agreement with previous findings stating that for some participants sport was everything (Jones, 2010). Some feelings that athletes associated with basketball are love, excitement, and happiness. For example, "Love and abundance", "[It makes me feel] complete", "'[I'm] happy to be able to do what [I] love", "I feel happy [and]

excited anytime I step on the court", "I love basketball", "I began a journey from happiness, joy, the love of playing, having fun like kids", "To be able to play gives me the joy of Christmas", "I love to play basketball", "It's my love, my desire", "It's the thing that makes me happy and proud".

Athletes also stated that they see basketball as a hobby and not as a job. A common saying was that when they compete they feel like kids just playing. As an example: "I look at basketball as more of a hobby and not as a job", "To me it doesn't feel like work". Two athletes (40%) also mentioned that basketball is all they know in life. Four of them (80%) see basketball as a blessing: "The biggest blessing", "[I am] blessed to be able to play", "I've been blessed to be able to play basketball and make a living", "It's a blessing", "I'm just grateful. This wasn't in the cards for me".

c. Positive Outcome

An injury experience can have a positive and learning outcome for the recovered athletes (Tracey, 2003). Even though their approaches differ from each other, all five athletes in the current study found a positive outcome out of their injury experience. One of our participants' statements, "You love it even more when you finally get it back", is supported by a previous study where the athlete stated that the injury made him love the game more (Clemet & Arvinen-Barrow, 2015). Other examples from our participants are: "It [is] an opportunity to start from scratch", "I have the confidence that if it ever happens again, I could get through it", "It's [a] testament of will power [and] what you tell yourself [is] powerful", "[I learned to] stay motivated, stay aggressive, attack [my] weaknesses". One of the athletes also highlighted the importance of stopping when you know that something is going wrong

in your body. More specifically he said: “When you know something is wrong, just stop [and] go get it checked. Don’t make the situation worse”.

d. Life after Basketball

When sport is such a big part of athletes’ lives and identity, they often struggle to imagine what they would do instead (Jones, 2010). The athletes in the current study were asked if they ever thought what they would do when they had to stop playing and how that makes them feel. Two of them (40%) mentioned that they did not even want to think about it and one cannot imagine not playing any more. However, they have all given thought to it and the alternative jobs they would want to do. Three of the athletes (60%) want to stay connected to basketball even after they stop playing, by being coaches or scouts and helping young basketball players develop and be successful. Two athletes (40%) said that when they are done playing, they will be done with basketball completely. For example, “There’s more to life than basketball. I want to do more than basketball”, “When I hang it up, I [will] hang it up completely”. Athletes also stated that thinking about their basketball career ending makes them feel ‘old’.

Figure 3. Table of Themes, Sub-themes and Codes around the Four Phases of the Injury Experience

Phases	Themes	Sub-themes	Codes
1. Before Injury Occurrence	a. Issues with the Team	Late payments. Personality of coach. Coaching style. Bad playing season.	*"Not getting our money on time was rough", "I didn't come halfway across the world to play basketball for free", "We're just out there free-styling because there is no plan", "Coach was a very difficult person to cooperate with", "Coach was trash talking me all the time", "The season has been very bad for us, we played horrible", "The season wasn't going well. We didn't have any leaders, no management, our coach got fired"*
	b. Psychological State	Stress. Frustration. Low mood. Non-enjoyment of sport. Low motivation. Low self-esteem.	*"It was hard to improve as a basketball player in the circumstances we were in", "It was very difficult and it affected everybody", "We didn't have the motivation", "It was a hard situation because there were too many problems", "Everyone gets frustrated", "There was a lot of frustration between the team", "I wanted to prove coach wrong, so I was playing with anger and I didn't enjoy it", "My confidence wasn't where it usually is", "It wasn't the way I wanted to play"*
2. Reaction to Injury	a. Negative Thoughts and Feelings	Worry. Frustration. Disbelief. Nervousness. Fear.	*"I was almost crying thinking 'I will be out another 6 months because of a broken foot", "I was worried", "I was screaming", "I instantly started praying, because I thought I tore something in my knee", "It was very mind-blowing, difficult and frustrating", "I didn't want to believe it, so I ignored it"*
	b. Appraisals of Diagnosis	Positive appraisals (happiness, relief). Negative appraisals (frustration, sadness).	*"I was happy for the information because I knew what was going on", "I felt relieved and happy knowing I didn't break anything", "It was frustrating because it was the third time it's happening so to have it happen again, it really hurt", "Why did I have to get injured now? What is this going to teach me?", "This is bullshit", "My heart just stopped". "I've been feeling pain all my life, I want to finally just play and be healthy"*
	c. Coping with Negative Thoughts and	Turning negative thoughts into positive. Goal-setting.	*"I tried to focus on the positives, keep pushing and keep looking forward", "I had to stay strong-*

	Feelings	Motivation. Challenge. Avoidance.	*minded, positive and kept moving forward", "I went quickly from pitying myself to try and figure things out", "I'm always going to make a goal of some kind for my self-improvement", "I changed my perspective so that I wouldn't fall apart", "I kept that motivation and what I was doing it for", "There was no way I was going to stop", "This wasn't going to be the end", "I took it as a challenge, as an opportunity", "I started going out because I didn't want to just sit around and be angry and upset about my knee"*
	d. Seeking and Receiving Social Support	Family. Friends. Significant others (wife, girlfriend). Teammates. Coaches.	*"My brother came and stayed with me and helped me do everything", "A lot of people who were close to me knew", "I called my mom once I got to my phone", "I was getting positive reassurance from my wife, my guys, and my brother", "The biggest one was my dad", "I told my teammate because he could relate the most and he is the most professional", "All of my teammates were checking in on me", "They were giving words of encouragement and they gave me more confidence"* *"I don't even know if coach knows", "Coach was mad because they really needed me for that game", "I didn't like how things were being handled", "If you care about your player, he should have said 'have your surgery"*
3. Role of Rehabilitation	a. Fluctuating Emotions	Beginning part (playing through pain, happiness, motivation). Middle part (progress slowing down, anger, frustration, low mood, inability to help the team, helplessness, decreased self-esteem, thoughts about quitting). End part (excitement, motivation).	*"60% of the season I was playing with pain", "I did my best to figure out how to manage the pain and deal with it", "I got used to playing with the injury", "I got used to feeling a certain kind of pain"* *"I was so excited at first", "I was happy, it felt like a relief", "I was really happy and motivated to get up and do something", "I was motivated and really happy, "I was extremely motivated"* *"It was frustrating at times because the progress was a little slower", "When you're hurt and you're sitting out you want to get back as fast as possible", "I was being frustrated of not being*

			healthy", "I would get frustrated with so many hours I was there", "I had gotten frustrated [because] I was there for too long", "I'm really over here for nothing, I'm not doing anything" "I was angry with myself that I couldn't go on the court", "It was tough not to be able to be out there and play with the guys", "I'd be frustrated watching the games knowing I could help my team win", "Being injured and not being able to play is one of the worst feelings ever", "You feel helpless and worthless, when you know you can help your team", "It was just too much. I was trying to leave but the [team] didn't allow it. I was just going to stop playing because it was frustrating", "I stopped doing it, even when I should've did it longer, because I wanted to get back to my routine before the injury", "I didn't really want to continue this rehab. I was going to do it when I needed it" "I was hype and really excited at the end of it", "I can shoot a basketball again", "I'm almost back"
	b. Loss of Self and Self-Doubts	Not being the same. Doubts. Loss of purpose. Becoming someone else.	*"What if it's never the same again?", "Maybe I'm not moving as fast as before", "I've had many doubts at times", "Am I going to make this 3-point shot?", "[It] would be the worst [to] injure myself again", "Am I somebody who is not really as good as he thinks?", "I'm sitting here for what?" "Why don't I feel like myself?", "I'm just not the same", "Am I really who I think I am?", "I wasn't feeling myself 100%", "I lost my swag", "I didn't like who I was becoming, I had to go back to my old self"*
	c. Relationship with Medical Staff	Encouragement. Help. Fun. Enjoyment.	*"I felt grateful for them", "I was fortunate to work with a great team of physios", "I had support from the foot doctors", "They just want what's bets for me [and] they didn't try to rush me back", "I was really cool with them", "They did a good job to help me get back", "They were very encouraging and let me ease my way into running again", "They*

			were my people of there and they always showed me love", "They made my time in there very fun. I enjoyed going to treatment", "I really enjoyed how professional they were" *"They're phenomenal at their job but I wasn't looking for that type of psychological support from them"*
	d. Seeking and Receiving Social Support	Family. Friends. Significant others (wife, girlfriend). Teammates. Coaches. (minimal support).	*"My mom, my girlfriend [and] my teammates were checking in on me everyday making sure I was alright", "My teammates kept encouraging me", "My friend [player another team] was really supportive", "It was good to know your teammates care about you", "My support system is phenomenal", "I'm very thankful", "I got support from some people in [the city] that were always there for me"* *"They [coaching staff] were taking their time until I was 100% recovered [and] they were really supportive", "Coach would check on me, asking how I was and he definitely cared about my health", "Coach was really supportive telling me 'We need you to be a strong team'"*
4. Returning to Sport	a. Reaction to Return to Play	Mixed Emotions. Excitement. Nervousness. Doubts.	*"I was excited for the game", "I was just happy to be back", "It was a great feeling", "It was perfect"* *"I was a little nervous about jumping exploding", "I was a little nervous, because you could tell by the way I was running that my ankle wasn't right", "I thought I was going to be extremely slow, I thought I was going to get tired faster"*
	b. Athletic Identity and Love for the Game	Part of their identity. Ball is life. Love. Importance of sport. Not just a job. The blessing.	*"It's directly tied with who I am", "When I'm playing, that is the purest form of who I am and my personality", "Basketball allows me to genuinely be myself", "I can actually be a basketball player again", "It's a big part of my identity and it helped me as a person", "Basketball is a direct correlation to life", "It teaches people about themselves and about life"* *"Ball is Life", "The round earth is the ball in my universe", "It means the world to me", "Basketball means everything",*

			"This is my life for real" "Love and abundance", "It makes me feel complete", "'I'm happy to be able to do what I love", "I feel happy and excited anytime I step on the court", "I love basketball", "I began a journey from happiness, joy, the love of playing, having fun like kids", "To be able to play gives me the joy of Christmas", "I love to play basketball", "It's my love, my desire", "It's the thing that makes me happy and proud" "I look at basketball as more of a hobby and not as a job", "To me it doesn't feel like work" "The biggest blessing", "I am blessed to be able to play", "I've been blessed to be able to play basketball and make a living", "It's a blessing", "I'm just grateful. This wasn't in the cards for me"
	c. Positive Outcome	Appreciation. Become Stronger. Learning process.	*"You love it even more when you finally get it back", "It is an opportunity to start from scratch", "I have the confidence that if it ever happens again, I could get through it", "It's a testament of will power and what you tell yourself is powerful", "I learned to stay motivated, stay aggressive, attack my weaknesses", "When you know something is wrong, just stop and go get it checked. Don't make the situation worse".*
	d. Life After Basketball	Staying connected. More than basketball.	*"Be a coach and help others be successful", "I'm going to coach when I finish basketball", "I would like to scout and help young athletes, giving them an opportunity. That way it will keep me attached to basketball" "There's more to life than basketball. I want to do more than basketball", "When I hang it up, I [will] hang it up completely*

DISCUSSION

The aim of this qualitative study was the in-depth investigation of American professional basketball players' experiences of an injury and rehabilitation process while competing for the A1 Greek Basketball League. With this in-depth investigation, the author wished to explore the relationship between athletes' injury experience and affective states. All participants in the study revealed a number of negative affective states related to different phases of their injuries. As mentioned before, affective states function as an umbrella under which feelings and emotions lie. In a sense, when we talk about athletes' affective states in regards to their injuries, we talk about their feelings and emotions about that experience. One interesting finding of the study is that negative affective states at the time before the injury occurrence seemed to have preceded athletes' injuries.

Before their injury occurrence, all participants reported experiencing problems with their teams, such as payment issues, issues with the coach or the coaching style, and the low level of success in the team. Payment issues included payments being late to the point where athletes' considered leaving the team. Issues with the coach and the coaching style involved the coach talking down to the players and not having a clear plan for the practices or games, to the extent that athletes had to improvise or free-style. Lastly, the season wasn't going well for most athletes in the study, because they were losing a lot of games. Those problems seem to have negatively influenced athletes' affective states before the injury, which were characterized by low motivation, stress, frustration, anger, low mood and low confidence. In turn, the negative affective states seem to have preceded athletes' injuries. This is in support with studies highlighting the role of daily hassle stresses in the prediction of injury occurrence (Ivarsson et al., 2013; Williams & Andersen, 1998). Existing research

suggests that pre-injury negative mood is related with an increase of the injury occurrence and frustration or anger may contribute to athletes injuring themselves (Smith et al., 1997; Heniff, 1998; Wiese-Bjornstal, 2010; Pensgaard et al., 2018; Wiese-Bjornstal, 2009; Gould et al., 2002). In contrast to other studies (Devantier, 2011), previous injuries were not found to be a possible predictor of injury in this study.

At the onset of the injury occurrence, athletes' affective states were predominately negative and influenced by their appraisals of the perceived severity of the injury. The main negative emotional responses included feelings of worry, shock, and frustration. This finding is in support of previous studies (Clement et al., 2015; Ruddock-Hudson et al., 2014; Carson & Polman, 2008), where athletes emotional responses amongst the injury occurrence were generally negative and included frustration, anger, shock, and being hysterical (e.g. crying, screaming). Likewise, existing research indicates that at the occurrence of an injury, athletes typically report negative thoughts (Tracey, 2003; Gould et al., 1997), which often lead to negative emotions (Johnston & Carroll, 1998; Leddy et al., 1994; McDonald & Hardy, 1990; Carson & Polman, 2008). The way in which injured athletes appraise their situation can potentially have more impact than the fact that the injury itself has occurred (Brewer, 1994; Gould et al., 1997). In our study, athletes who appraised their injury to be more severe than in reality experienced more negative thoughts and emotions at the occurrence of the injury.

After the response to the injury occurrence, the affective states in regards to the diagnosis changed for the athletes. Two athletes who had a negative appraisal at the occurrence of the injury felt happy and relieved knowing the severity of their injury. Three athletes who perceived their injuries as less severe at the occurrence of

the injury expressed negative thoughts and feelings of frustration and sadness. These findings appear to be consistent with previous literature (Clemet & Arvinen-Barrow, 2015; Tracey, 2003) where athletes indicated that knowing the severity of the injury fostered a positive outlook on the situations, while for others it amplified some of the negative emotions (e.g. anger, shock). Johnston and Carroll (1998) also highlight the importance of diagnosis as a point at which initial responses to injuries might be re-evaluated and/or changed. Most of our participants (3/5) at this stage decided to continue playing through their injuries despite the consequences. Thus, it is important that the medical staff clearly explains to the athletes about the long-term or short-term risks that they may have while playing through an injury. Ultimately, it is the athletes' decision to continue playing; however the medical and coaching staff should primarily consider athletes' health and future career, rather than the damage it could cause to the team if the athlete stayed absent from the sport.

At the stage after the diagnosis and before the rehabilitation athletes made an attempt to cope with their negative affective states (thoughts and feelings). According to Van der Does et al (2017), recovering from the negative appraisals of an injury can be affected by athletes' coping strategies. In the present study, athletes coping strategies included turning negative thoughts into positive and goal-setting. This finding supports previous studies (Ruddock-Hudson et al., 2014; Tracey, 2003) that found athletes using the same coping strategies. Avoidance coping strategies were also identified in the study, where athletes took part in alternate activities to keep their mind away from the injury. This finding supports Ruddock-Hudson et al (2014), who revealed athletes using avoidance coping strategies to cope with their negative thoughts and feelings. Social support was another way of coping at this phase of the injury (after injury occurrence and diagnosis, but before injury rehabilitation). Social

support agents varied from family (parents, siblings), significant others (wife, girlfriend), friends and teammates. Less social support was provided by the coaches, who were mostly characterized as being upset, mad or frustrated at the occurrence of the injury. Previous research has also shown the minimal support athletes received from their coaches at the initial phase of the injury (Granito, 2002; Tiedens, 2016). Given the impact that coaches can have on the athletes, it is essential for coaches to be more aware of athletes' negative affective states at the occurrence of the injury as well as after the diagnosis. Coaches can play a significant role in helping athletes cope with their negative thoughts and feelings instead of possibly enhancing them by being upset, mad or frustrated at the onset of an injury.

Transitioning to the rehabilitation phase, our participants' affective states varied depending on the part of rehabilitation (beginning-middle-end) and included both positive and negative appraisals. All participants expressed motivation for the beginning of their rehabilitation, which was followed by frustration during the middle part of it. Their frustration was mostly connected with a decrease in the progress and the long duration of the rehabilitation process. This finding supports previous studies that found frustration to be the main emotion of athletes during rehabilitation (Arvinen-Barrow et al., 2014, Clement et al., 2015; Granito, 2001; Tracey, 2003). At the middle phase of rehabilitation, some athletes also reported of having low mood and a decrease in their self-esteem. Moreover, a 'loss of self' and self-doubts were apparent during this time, which is in agreement with available literature (Arvinen-Barrow et al., 2014; Jones, 2010; Ruddock-Hudson et al., 2014; Tracey, 2003). Given that most athletes in our study continued playing through their injuries, it is evident that their physical abilities were limited until they were fully recovered. These physical limitations were related to athletes' self-doubts and not feeling like

themselves on and off the court. Thus, based on our research and available literature, it would be best for injured athletes to return to play only when they are fully physically and psychologically ready, in order to avoid the negative impact that playing through injury can have for them.

Existing research highlights the importance of social support and the influence it may have on the injury rehabilitation (Gould et al., 1997; Tracey, 2003; Bianco, 2001). Although social support was not a significant indicator of adherence to rehabilitation, perceived and received support from others is an important aspect of the recovery process of the athlete (Macchi & Crossman, 1996; Udry et al., 1997). This means that even though social support did not determine whether athletes would stick to their rehabilitation or not, it can help them cope with the negative thoughts and feelings that might arise through the course of the injury rehabilitation. Athletes' relationship with the medical staff served as a type of social support, even though athletes weren't seeking that type of support. Similar to previous studies (Ruddock-Hudson et al., 2014), positive interactions and received support from the medical staff was an integral part that facilitated athletes' rehabilitation. According to Arvinen-Barrow et al (2014), emotional responses can affect both the physical and psychological functions of athletes during rehabilitation, thus medical staff needs to understand the possible range of emotions and learn how to work effectively with athletes to enhance those functions (Arvinen-Barrow et al., 2014).

Family, significant others, friends and teammates remained constant agents of social support throughout the whole rehabilitation process. Coaches' support, even though still minimal, was more frequently expressed at this phase. This finding corresponds with previous studies, in which players reported a lack of support from the coaching staff (Ruddock-Hudson et al., 2012; Ruddock-Hudson et al., 2014).

Based on Podlog and Dionigi (2010), it could be useful to examine coaches' understanding of the injured athlete and the role of a coach in facilitating athletes' return to sport after an injury. The participants in the present study fluctuated as to the degree and type of social support they felt they needed, however all expressed their appreciation and the benefits of the received support during the rehabilitation process.

Towards the end of rehabilitation most of our participants expressed positive feelings and increased motivation amongst returning to the sport. For the three athletes who returned to sport while still injured, the return-to-play process was intertwined with their rehabilitation process and thus involved the pattern of thoughts and feelings mentioned in previous paragraphs (look pp. 59 'Transitioning to rehabilitation phase'). However, returning to sport involved mixed affective states for the two athletes who were absent from basketball for 4-6 weeks. Those participants reported feelings of excitement and happiness, while also feelings of nervousness amongst returning to play. This finding is in support with previous research that has found athletes to experience both positive and negative emotions amongst returning to the sport (Clement et al., 2015; Ruddock & Hudson et al., 2014; Tracey, 2003). In contrast to previous studies (Bianco, Malo, & Orlick, 1999; Gould et al., 1997; Shelley, 1999; Kvist et al., 2005; Tjong et al., 2014; Ardern et al., 2012), fear of re-injury was not a concern for the athletes in the current study. This can be explained by the fact that their injuries were light to moderate and allowed them to either continue playing or return to the sport very shortly after the injury. History of previous injury can also be an explanation, as athletes were fully aware of the physical and emotional consequences that can come with experiencing an injury, and they had been through that experience before.

Athletes' identity was found to be directly tied to their sport. This makes it hard for them to imagine being something else than basketball players. The importance of basketball and the love for it was evident from the participants' statements. Basketball is a huge part of their lives, thus they struggle to imagine what they would do, who they would be, and what their lives would be like without the sport. Previous studies have also identified the athletic identity, the importance of the sport and the love for it (Granito, 2001; Jones, 2010; Madrigal & Gill, 2014; Ruddock-Hudson et al., 2014; Richardson, 2009; Leno, 2007). This makes the experience of an injury and the absence from the sport even harder for the athletes, but giving up was not an option for them. All they know is basketball, which explains the variety of negative affective states (thoughts and feelings) that they went through in the face of losing that identity as a result of their injuries. It also gives an explanation to the fact that three of our participants continued playing through pain and injury, holding on tight to their basketball identity, rather than losing it even for a bit by sitting out.

Although going through an injury was a challenging process for the athletes in our study, they all perceived the outcome of the injury experience as a positive one and one that they learned from. According to Wadey et al (2013), growth through a difficult situation may lead to positive changes that propel athletes to a real or perceived higher level of functioning than the one prior to the negative circumstance (Wadey et al., 2013). Also, Tracey (2003) has suggested that when injured, athletes often reflect on their injuries, which can enable them to learn about themselves, their inner strength and commitment, as well as to not take being healthy for granted.

Noteworthy, most athletes in the current study returned to the sport while still injured and continued playing through pain and injury as mentioned before.

According to previous studies, returning injured athletes to sport before they are ready can lead to increases in sport anxiety and fear, and can potentially increase the risk of re-injury (Chase et al., 2005; Quinn & Fallon, 1999). Even though the athletes in our study did not report feelings of anxiety and fear, they reported a variety of other negative affective states (self-doubts, low mood, low self-esteem, loss of self). Thus, this finding can be useful in preventing athletes in the future from coninuying to play through pain and injury, in order to avoid the negative psychological impact that it can have for them. Similarly, inspired from one of our participant's statements, when athletes feel like there is something wrong with their body, they should 'stop and go get it checked' before it becomes worse. Another one of our participants, while reflecting on his injury stated: "I should have gotten the MRI sooner". Coaches should also encourage athletes to stop playing, when they are experiencing constant pain, instead of allowing them or even pushing them to continue (example of coach pressures from the study: "Just continue playing").

This study hopes to provide athletes and their immediate surroundings (parents, teammates, coaches, medical staff) an in-depth look into the injured athlete's emotional world and needs while going through an injury. In that way they can be aware on how to provide the correct type of social support and help athletes cope with their injuries more effectively. Finally, the study highlights the various negative affective states that athletes have to face with the occurrence and through the recovery of an injury. Thus, more importance should be put from families, coaches, medical staff, and sport medicine professionals into finding ways to prepare and help athletes cope with the negative affective states that come with an injury.

LIMITATIONS

Although the results of the present study can provide useful findings in regards to athletes' affective states during their injury experience, some limitations are worthy of mention. The use of qualitative methods, although useful for the purposes of the study, cannot generalize the findings to the population of all injured athletes. The participants of the study were a sample of the A1 Greek Basketball League and cannot be representative of athletes who compete for different sports and athletes who compete at varying levels. For example, a professional athlete might have a different experience of an injury than an athlete who competes at a lower competitive level. Age and gender can also be considered as limitations, since the findings might not apply to female athletes, or athletes of a different age. Also, the type of injuries of the athletes in the present study were light to moderate and allowed them to return to play shortly after the injury, thus athletes with major or long-term injuries might have a different experience of the injury phenomenon. Additionally to that, participants were interviewed retrospectively, which may have resulted in poor recall of their specific thoughts and emotions during the different phases of their injury.

STRENGTHS

Despite the aforementioned limitations, our study has a number of strengths as well. In particular, to the best of our knowledge, it is the only study that qualitatively examined the injury phenomenon in professional basketball players. Given the popularity of basketball and the high rate of injuries in basketball players, this study can be of great importance, as it gives an in-depth, detailed look into an athletic injury experience through the eyes of the athletes themselves. The study can provide new insight as to which factors can possibly predict an athletic injury, as well as effective

ways to cope with the negative affective states that arise from the injury occurrence until the athletes' full recovery. This can be accomplished through the first-person information that athletes give about their injury experience, which in turn can help their surroundings (coaches, teammates, medical staff, family) have a better understanding of the phenomenon. Lastly, the study aims to provide information about the negative impact that playing through an injury can have for the athletes, as well as possibly prevent future athletes from returning to play without being fully physically and psychologically ready.

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APPENDIX A: Interview Questions

Demographic Info

1. Age, height, weight, married/ in a relationship/ single, kids/ siblings, education
2. How many years do you play professional basketball? In Europe?
3. Is it your first year playing in Greece? When did you come here? (Did you come to play basketball in Greece before?)

Part A (Injury)

Section I (Up to diagnosis)

Stage 1 - Injury

4. Tell me a bit about your injury. (How did it happen? When? Where? At a practice/ game?)
5. Tell me about that game/ practice before the injury occurred.
6. What were your thoughts/feelings the moment the injury happened? (What do you remember about that moment?)
7. How about later that day? (What did you do? Were you thinking about it? What were your thoughts exactly? Feelings?)
8. How long after did you find out exactly what it was?
9. So what were your thoughts/ feelings until you found out what it was (type of injury & injury severity)?
10. How did important people in your life react towards it (wife, kids, mother, siblings, friends) when the injury came up before the diagnosis?
11. How about your coach? Your teammates?
12. How did you express all those feelings that you had? How did you try to cope with them?

Stage 2 - Diagnosis

13. And then, what was the diagnosis of the injury (type, severity)? (How long did you have to be out for?)
14. How did you feel when you found out? What were your thoughts? (How did you express your feelings the day of the diagnosis? How did you cope with the negative feelings?)
15. How did your family react towards the diagnosis? Your coach? Your teammates? (Did they make you feel any better about it? Worse? More pressure?)

Part A (Injury)

Section II (Migration issues in relationship to the injury)

16. How was that day before the game/practice that you got injured? What was your psychological state?

17. How would you describe your psychological state the week before your injury happened? (low mood, lack of interest/ energy/ motivation/ self-esteem/ concentration, sleep disturbances, loss of appetite, fatigue)

18. How about a few weeks before?

19. Has that been the same a month or two before the injury?

20. How would you describe your daily life in Greece for the period before the injury happened? Is it different compared to your country?

21. How about the type of playing? The coaching style of the coach? The teammates? Team management? The fans? Opponent teams? (to examine problems he may face in those areas/or with those people, like accommodation/payment issues, communication/cooperation, racism/bias)

22. Do you think that any of these things had any or some effect on your injury? (I mean, do you think that any of the above factors or experiences you had might be linked to the occurrence of your injury in any way?) How?

Part B (Treatment & Return to Sport)

Stage 3 - Treatment

23. Did you have to get surgery for it or just rehabilitation (non-surgical therapy) (or both)?

24. What type of therapy did you have to do? (How many times per week?)

25. What were your initial feelings/thoughts about the surgery/rehabilitation (or both)?

26. How were you introduced to the physiotherapists? (Did the team choose him for you? Did you agree with that?)

27. How long did it take to complete your rehabilitation?

Stage 4 - First period of Treatment

28. How was the start of the rehabilitation process for you?

29. What were your thoughts/ feelings about it? (Were you motivated for it?)

30. Were you satisfied with how your physio was working? The rehab center? The equipment?

31. Did you have any specific goals about the rehabilitation process?
32. Did you seek any social support throughout that first period of the rehab? Would you say that you had a supportive group of people around you? How was your coach through that time? (Was he supportive?) Your teammates? (Were they encouraging you? Could you talk to them?) Did anything change in your relationship with your coach/ teammates?
33. How about your family and friends? (Were they supporting you through this first period?)

Stage 5 - Second period of Treatment

34. Did your feelings/ thoughts change around the middle part of rehabilitation?
35. How did you express all those feelings that you had?
36. How did they affect you in your daily life? (How did your daily life change after the injury?)
37. How did you try to cope with the negative feelings/thoughts? (Did you have any hobbies to take your mind off of it?)
38. Did your goals change at all at this point of the rehabilitation process?
39. Did you still have to attend the practices and games even though you were injured? What did you think about that? (Was it affecting you in any way?)
40. Did your motivation change at any point of the rehab process? What were your thoughts?

Stage 6 - Third period of Treatment

41. How about the last period of the rehab? How was that for you?
42. How was it different from the first and second period?
43. Was there any point of the rehab process that you felt like giving up? (What were your thoughts?)
44. What was your psychological state at that time? (low mood, lack of interest/ energy/ motivation/ self-esteem/ concentration, sleep disturbances, loss of appetite, fatigue, thoughts of harming himself/ death)
45. How did you express these feelings? How did you try to cope with them?
46. What would you say you liked/ didn't like about the rehab process? (Did you have a good relationship with the physio?)
47. Were you satisfied with the way the MD and/or physio helped you through this process? Do you think that your physio was setting realistic goals for you? Were these

goals in compliance with your personal goals? Do you think that you achieved those goals?

48. In your opinion, how did your relationship with the physio and/or MD affect you during rehabilitation? (Was the physio and/or medical doctor somebody you could express your feelings/thoughts to? Did you feel like you could trust your rehab process to these people? You could count on them?)

49. Did your support system change in this stage of rehab? (Support from sports environment, from family/friends) If you could change anything about it, what would it be? (To what extent did not having your friends and family physically by your side affect your thoughts and feelings?)

Stage 7 - Returning to Sport

50. What were your initial thoughts/feelings about returning to the sport?

51. Did you at any point feel like you didn't want to return?

52. What were your thoughts about yourself and your abilities? (Did you at any point doubt yourself?)

53. Did you have any worries? What were those?

54. How was that first day of being back for you?

55. What were your feelings/ thoughts? (Any fears?)

56. How did your coach handle you being back? (Did he have realistic expectations of you?) Your teammates? Your family/friends?

Part C (Importance of Sport)

57. What kept you going despite the difficulties?

58. What does basketball mean to you? (What comes to your mind when you think about basketball? How is it connected to you? How is it part of your identity as a person?)

59. Can you imagine your life without it?

60. Did you at any point think about what you would do if you couldn't return to the sport?

61. How did that make you feel?

62. Do you think that you gained anything positive through this experience?