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**The Role of Social Support During Injury Recovery, Rehabilitation, and
Return to Play**

By

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Exercise and Sports Science

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Abstract

Social support is a multidimensional construct (Arvinen-Barrow & Pack, 2013), primarily consisting of three different types of support: emotional support, informational support, and tangible support (Stowe, 2015). While the athletes are the ones who receive and perceive the effectiveness of the social support, those who give the social support can come in a wide variety of people (Yang, et. al., 2010). Previous research on male versus female athletes show very small differences (Stowe, 2015). Social support is key during the returning to competition phase following an injury (Fernandes, et al, 2014). Despite previous research in the field, there remain limitations and future directions that researchers can focus on when studying and learning more about athletic injury and the effects of social support on recovery, rehabilitation and return to play. Overall, it can be said that the main purpose of social support during injury rehabilitation is to help the athlete have a sense of belonging and assurance, which in turn helps them to understand they are not isolated because of an injury and then give them a support network to help guide and encourage them along the way (Arvinen-Barrow & Pack, 2013). The purpose of the following paper is to synthesize current literature surrounding the role of social support during recovery rehabilitation and return to play from sport related injury as well as highlight limitations and gaps in previous research while suggesting future directions.

Introduction

In the early 1990s more people began participating in sport, leading to an increased number of injuries (Tracey, 2003). With this increase in injuries, the focus of the was mostly on the physical aspect of the injury, ignoring the psychological aspects and behaviors of an injured athlete (Tracey, 2003). Throughout all of sport in the United States, there is an estimated seven-million sport and recreation-related injuries that can go unreported each year (Sheinbein, 2016). With this, there is a need to observe and help athletes cope with stress and stressors while recovering from an injury (Stowe, 2015) Understanding the relationship between athletes' emotional and behavioral responses is key for recovery, along with how anxiety and stress affect the recovering athlete (Clement, Granquist, & Arvinen-Barrow, 2013).

There is a growing area of research that focuses on the importance of social support in recovery from both illness and injury (Yang, Peek-Asa, Lowe, Heiden, & Foster, 2010). In 1984, researchers defined social support to be “An exchange of resources between at least two or more individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient” (Stowe, 2015). Another more recent definition refers to social support as the acts performed in order to give or get help, and relates to those which reduce stress and assist coping in life. It constitutes everything from words and actions to feelings that enable support and can differ depending on a person's problems and circumstances (Dolan & Brady, 2012). Another way social support can be described is by measuring the amount of people and the quality of people a person can rely and depend on during periods of stress (Yang, et al, 2010). Overall, during the process of injury rehabilitation, social support helps with coping, relieves distress, and helps athletes keep their focus and motivation on recovery (Yang, Schaefer, Zhang, Covassin, Ding, & Heiden, 2014).

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Research shows that social support is important for coping for athletes dealing with the psychological side of an injury (Yang, et al, 2014). An injury is not only going to disrupt an athlete on a day-to-day basis, but also through the way social support is provided to them (Clement, et al, 2013). The availability of social support enhances mental health and strengthens ability to cope in a crisis (Dolan & Brady, 2012). Research has shown that greater than 80% of injured athletes rely on sources of social support throughout their recovery (Yang, et al, 2014). Athletes ranging from novice, recreational, advanced, and elite who become injured all have to address and respond to some sort of psychological stress brought on by an injury (Sheinbein, 2016 & Clement, et al, 2013). The responses to the injury will have a significant role in the quality and time spent in the rehabilitation process (Clement, et al, 2013). This function of social support 'as a buffer to stress' has been well established within the research literature and it is noteworthy that it is one of the more proven theories within the social sciences (Dolan & Brady, 2012). The social support given to an injured athlete tends to be more available directly after the injury and slowly decreases throughout the stages of recovery and return-to-play (Stowe, 2015). With this, research shows that the more successful recovery is, the better the quality and quantity of social support present and available to the athlete (Yang, et al, 2014). The quality of the social support given is largely based on the perception of the injured athlete, especially in the area of perception of recovery after injury (Wahl, Gnacinski, Nai, & Meyer, 2010). Social support is most effective and productive when the recipient or athlete is satisfied with the support received (Stowe, 2015). Effective social supporters provide us with help and collectively act as 'safeguards to stress' (Dolan & Brady, 2012). The idea that social supporters can act as a safeguard to stress further supports the idea that athletes who are lacking in social support are

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more prone to injury than those who have readily available support given their levels of stress (Stowe, 2015).

The relationship between social support and stress is further related to the relationship between stress and injury (Andersen & Williams, 1988). Overall, there are many factors that contribute to injury, mainly physical, but there are also psychological and social factors to take into account (Andersen & Williams, 1988). The stress-injury model for athletic injury is based on the assumption that there are two basic mechanisms behind the relationship: general muscle tension and deficits in attention during stress (Andersen & Williams, 1988). Generalized muscle tension can disturb motor coordination and reduce flexibility, which contributes to strains, sprains, and other musculoskeletal injuries (Andersen & Williams, 1988). Beyond physical, there are also psychological things that should be taken into account, like an athlete's history of stressors, assessment of previous injuries, and personality traits and differences (Andersen & Williams, 1988). With this, it is hypothesized that stress history directly contributes to the stress response, but the personality factors may act either directly or through the effect of the history of stressors (Andersen & Williams, 1988). Coping resources include social support, which may act as a preventative measure for the stress response, thereby limiting the risk of injury. This effect is known as the main effect theory, where social support has the ability to limit the risk of injury, and/or help enhance recovery (Arvinen-Barrow, M. & Pack, S. 2013).

After injury, athletes find those in the sports medicine team who are more familiar with the rehabilitation processes more effective and more supportive throughout the recovery process (Sheinbein, 2016). Research has shown that the support given to an athlete could serve as a protective factor, working to help reduce distress after an injury and improve motivation during the recovery period (Yang, et al, 2010). Also having the knowledge about pre-injury factors as

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influencers on post injury rehabilitation is needed in making the correct psychological strategies are used throughout the process (Clement, et al, 2013). For this process to be the most success, the correct type of social support must be used at the correct time (Yang, et al, 2010). This is a fluid process, and changes with the behavior, progression and perception from the athlete (Clement, et al, 2013). Therefore the purpose of the following paper is to synthesize current literature surrounding the role of social support during recovery rehabilitation and return to play from sport related injury as well as highlight limitations and gaps in previous research while suggesting future directions.

Types of Social Support

Research has shown that there are different types of social support available to an injured athlete (Stowe, 2015). Overall, social support is a multidimensional construct (Arvinen-Barrow & Pack, 2013), though many researchers focus on three different types of support: emotional support, informational support, and tangible support (Stowe, 2015). However, there are arguments that researchers make to study more than three types, or dimensions, of social support (Arvinen-Barrow & Pack, 2013). Researchers Arvinen-Barrow and Pack, stated in their 2013 research that there are five major types of social support: emotional support, technical support, informational support, tangible support and motivational support; each of these then being able to be broken down further into more specific types (Arvinen-Barrow & Pack, 2013). For the purposes of this paper, we will explore emotional, information, and tangible supports.

Emotional support is reliant on active and empathetic listening, being trustworthy, understanding, and having an open environment where the athlete can feel safe (Stowe, 2015). The use of emotional support tends to be most useful immediately following an injury, when

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returning to play, and if rehabilitation is progressing slowly (Yang, et al, 2014). One important thing to remember is that the person providing the emotional support is on the recipient's side (Weinberg & Gould, 2019). Emotional support may be one of the most crucial parts for an athlete's social support throughout the entire rehabilitation process, but especially immediately after the injury (Yang, et al, 2014).

After some time passes, injured athletes may benefit more from informational support (Yang, et al, 2014). Informational support means the person should be able to provide feedback that works towards daily rehabilitation goals and not long-term goals (Stowe, 2015). Athletes who are struggling with motivation in rehabilitation, stated that they needed informational support to help initiate recovery and maintain active coping strategies (Yang, et al, 2014).

During the initial injury phase, tangible support may be one of the most beneficial types of social support provided to the athlete (Arvinen-Barrow & Pack, 2013). Tangible support is focused on how others provide assistance and resources to cope with the stressful event (Stowe, 2015). Tangible support relates to concrete instrumental assistance given to an individual which an injured person is given the necessary resources to cope with an injury (Rees, Mitchell, Evans, & Hardy, 2010). This includes providing material, or tangible, assistance such as providing transport to rehabilitation, helping with general household chores, and financial support, thus directly facilitating the athlete's chances of goal achievement (Arvinen-Barrow & Pack, 2013). Family and friends are usually the people who provide tangible support the most for an athlete with physical limitation (Arvinen-Barrow & Pack, 2013). Others may call this instrumental support (Yang, et al, 2014).

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Over time research has shown that depending on the athlete and their personal situation, different types of support may be more appropriate than others for different phases of the recovery (Arvinen-Barrow & Pack, 2013). Previous research suggests that recovery and the emotional response to that injury comes in phases (Tracey, 2003). The type of support needed may change throughout the rehabilitation process, and some types of support may not be needed at all (Stowe, 2015). For the best recovery, the right type of social support provided at the right time is important to best meet the athlete's needs (Yang, et al, 2014). Growing support also suggests that emotional social support, defined as expressions of empathy, love, trust, and caring may be crucial to recovery for injured collegiate athletes; other types of social support, including instrumental support and informational support may be available to injured athletes as a part of injury treatment (Yang, et al, 2014). The athlete and their recovery process dictate what type of support is needed (Stowe, 2015). Additionally, the athlete needs to be self-reliant in setting goals for the recovery progress and should not feel indebted to those providing the support (Stowe, 2015). For the best recovery, the entire sports medicine team, including athletic trainers, would benefit from recognizing these situations and being able to provide the appropriate type of support (Yang, et al, 2014).

Sources of Social Support

Athletes' social support during the recovery process can come from many different people, including the athlete themselves (Yang, et al, 2010). People who can affect the social support of an athlete can include anyone within the social circle of the athlete (Yang, et al, 2010). There are varying degrees for which a person can be a part of the social support team for the athlete (Clement & Arvinen-Barrow, 2013). Anyone that an athlete comes into contact with for a longer period of time can be considered a part of their social support network (Tracey, 2003).

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Other people, including doctors and coaches, are known to be part of the social support network (Yang, et al, 2010). Each of these individuals can have a positive or negative effect depending on the perception from the athlete (Yang, et al, 2010). Perception from the injured athlete is usually the driving force determining the effectiveness and amount of social support needed (Yang, et al, 2010).

The athlete is the main person within the social support setting that is affected by it all (Sheinbein, 2016). Research has shown there can be positive effects from the social support for athletes before, during and after injury (Stowe, 2015). The athlete themselves are the main component for the effectiveness for the recovery and their willingness to commit to rehabilitation (Sheinbein, 2016). The athlete cannot become completely reliant on the supporter but has to have some self-reliance in setting the goals for the recovery process (Stowe, 2015). Researchers Clement and Arvinen-Barrow have stated that access (or lack of) to appropriate support from the sports medicine and social support team can lead to a change in the roles and relationships of those involved with the injured athlete (Clement & Arvinen-Barrow, 2013). Without this self-reliance the athlete can begin to feel powerless or indebted to the supporter (Stowe, 2015). There should be a balance between the athlete and those providing social support. Research has shown athletes see the amount of or lack of social support to be a stumbling block within their recovery process (Tracy, 2003). The injured athletes are the main recipients of social support and are the ones who are most likely to gauge the effectiveness of that support through their perception (Stowe, 2015).

Researchers have developed a multidimensional model that looks at the different persons who affect an athlete's social support network (Clement & Arvinen-Barrow, 2013). There is a primary team that often consists of the sport medicine professionals who work closely with

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athletes throughout the entire rehabilitation process, whereas the secondary contains other members of the sports medicine team, allied health professionals along with those who also interact with the athlete on varying degrees throughout the rehabilitation process (Clement & Arvinen-Barrow, 2013). The need for which group is fluid and changes throughout the injury process (Clement & Arvinen-Barrow, 2013). While there is a distinction between the primary and secondary team, the roles of the individuals may interact and intertwine with that of another in a number of ways (Clement & Arvinen-Barrow, 2013). The primary group is a smaller group that is generally just made up of physiotherapists, athletic trainers, physicians, and surgeons if needed (Clement & Arvinen-Barrow, 2013). This team works with the athlete almost exclusively and regularly right after an injury occurs and during the initial stages of injury (Clement & Arvinen-Barrow, 2013). The secondary team is a larger group that can include coaches, teammates, friends, family, spouse/partner, sports psychologists, clinical psychologists, psychiatrists, sport nutritionists, dentists, podiatrists, biomechanists, physiologists, strength and conditioning coaches, message therapists, and any others who interact with the athlete during their injury and rehabilitation (Clement & Arvinen-Barrow, 2013). Even though these are part of the secondary rehabilitation team, they are still able to play a significant role in the recovery for an athlete (Clement & Arvinen-Barrow, 2013). All parts of the social support network, including sports medicine personnel, family members, coaches and teammates, should be informed about the different roles each play in supporting the injured athlete throughout the recovery process (Stowe, 2015).

While the athletes are the ones who receive and perceive the social support, those who give the social support can come in a wide variety of people (Yang, et al, 2010). Doctors, athletic trainers and coaches can be an integral part of the recovery process by helping to

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minimize the stress from the injury and help the athlete stick to rehabilitation exercises and regimens, in order for the athlete to have a successful recovery (Yang, et al, 2010). It could be said that the athlete turns to these people rather than family and friends because they can provide informational and emotional support to the athlete, but also a unique understanding to the athlete's identity (Yang, et al, 2010). Many researchers agree that the most effective people to provide social support to an athlete are those who have a closer relationship with them (Stowe, 2015). Aside from these, the rest of the medical staff can also be a strong source of social support (Tracey, 2003). These professionals were relied upon for the information given to the athletes throughout the recovery (Tracey, 2003). Outside of the formal hospital setting, after an injury, an athlete can perceive an increase of social support from athletic trainers (Yang, et al, 2010). Athletes have reported that with more social support from athletic trainers and others they are less likely to experience adverse symptoms like depression or anxiety (Yang, et al, 2014). The entire sports medicine team can work together to work with an athletes' psychological responses to an injury to help speed up and improve the quality of the recovery process (Clement, et al, 2013).

Many times the most successful way to help the athletes is done in the form of goal setting (Sheinbein, 2016). Different parts of the sports medicine team, including the coaches are able to help the athletes set goals for themselves for the different areas of the recovery (Stowe, 2015). Researchers have shown that there is also an increase in perception for doctors and coaches for social support after an injury (Yang, et al, 2010). While many coaches and athletic trainers do not have extensive training in the psychological recovery for an athlete, they usually end up playing one of the bigger roles for the athlete, and goal setting is one effective way for them to manage and help with this (Yang, et al, 2014).

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Previous research has noted that athletic trainers may be one of the most effective sources of social support by the athlete's perception because they are present and play a key role in the prevention, recognition, management, and rehabilitation of the injured athlete (Yang, et al, 2010). Working with athletes on a daily basis and helping to treat the injury on a daily basis can create a stronger relationship between athlete and athletic trainer giving the impression that they may be more effective in their role for social support (Yang, et al, 2010). The time that an injury occurs during the season can also affect the athlete's perception of not only the athletic trainer, but the sport medicine team as a whole (Tracey, 2003).

Overall, family members play an extremely important role in meeting the social support needs of an injured athlete (Stowe, 2015) along with providing multiple types of social support (Clement & Arvinen-Barrow, 2013). Researchers have stated that family and friends have been found to be the primary sources of social support for adult male and female athletes both prior to and following the occurrence of an athletic injury (Fernandes, Reis, Vilaça-Alves, Saavedra, Aidar & Brustad, 2014). Family and friends are best equipped to provide emotional and listening support, but also provide material assistance, known as tangible support (Arvinen-Barrow & Pack, 2013).

Family members can also be crucial to the recovery process, social network, and support for an athlete, but a study of different collegiate athletes showed that after an injury there is an increase in athletes turning to coaches, athletic trainers and physicians (Yang, et al, 2010). Even as athletes move onto college and their day to day lives change, the family remains a large part of their social support network during recovery (Yang, et al, 2010). This could be because the athlete is removed from the home environment and is placed physically away from family (Yang, et al, 2010). Comparatively, there are studies that have shown that the reliance on

families may decrease against those who have the knowledge and training for the rehabilitation process for their injury (Sheinbein, 2016).

Gender Differences in Social Support

Research conducted to compare the social support ideas on male versus female athletes show very small differences (Stowe, 2015). At the same time, other research shows that gender has indirect effects on perceived stress and recovery through pain catastrophizing and chronic psychological stress (Wahl, et al, 2020). Overall, there is a lack of research on the topic of social support in relation to sports injuries when looking at gender differences (Stowe, 2015 & Wahl, et al, 2020). However, given the difference in perceived stress, it is reasonable to suggest there should be a difference in care and support systems to meet the needs of both male and female athletes (Yang, et al, 2010), using sex-specific techniques to help athletes be more optimistic throughout the entire recovery process (Yang, et al, 2010).

The differences in males versus females as to their sources of social support for both before and after an injury, may be influenced by the idea that females are more willing to reach out for help when facing a health problem than their male counterparts (Yang, et al, 2010). In one study, evidence shows that male athletes reported more sources of social support than female athletes did (Stowe, 2015 & Yang, et al, 2010). Previous research has shown that there was already a difference in perceived social support between males and females both preinjury and postinjury (Yang, et al, 2010). The female athletes in this study reported using friends rather than professionals for social support (Stowe, 2015). Females have been shown to respond better to practical and emotional types of social support over their male counterparts (Fernandes, et. al.,

2014). Emotional support may be more helpful due to the chronic psychological stress female athletes experience, which is greater than their male counterparts (Wahl, et. al., 2020).

Different research has shown that witnessing an injury can produce more stress, anxiety and trauma within a female over a male (Day & Schubert, 2012). In a separate study, female athletes reported more social support than that of their male counterparts (Stowe, 2015). Some researchers have found female athletes were more satisfied with the support they were receiving before the injury (Foster, et al, 2010). Further, female athletes perceived more social support available throughout their network of people (Stowe, 2015). The female social support group preinjury, tended to consist of more family and friends versus that of their male counter parts (Yang, et al, 2010). Through studying the perception of the social support given through coaches, it was still seen that it was more important to females to receive emotional challenge support from the coach (Stowe, 2015). Different studies have also shown that the female social support sources grew after an injury occurred (Yang, et al, 2010). In one other study it was also seen that females regarded coaches to be more negative towards them following an injury (Stowe 2015). Overall, the gender differences in social support, thus far, are based on perception (Stowe, 2015). Further research is needed to help develop sex-specific methods of helping different athletes throughout the recovery process, especially in the psychological aspects, because social support is multi-dimensional and no one type is universally preferred (Yang, et al, 2010). Based on this, it is seen that paying attention to the differences of gender when an athlete is in recovery and rehabilitation is still being researched (Stowe, 2015).

Return to Play and Social Support

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The returning to competition following an injury shows a key phase in an athlete's recovery and rehabilitation program and is usually accompanied with recognition and uncertainties (Fernandes, et al, 2014). The idea of an athlete returning to play should be determined by coaches, athletic trainers and other members of the sports medicine team based on not only physical recovery, but psychological readiness as well (Weinberg & Gould, 2019). Studies have shown that coaches have felt it is important within their roles during the athlete's return to sport following a serious injury to meet the athlete's social support needs (Fernandes, et al, 2014). Social support has been studied and shown to be a major facilitator in injury recovery (Stowe, 2015). Athletes with higher levels of social support have been shown to be more protected from injury, but a low level of social support can significantly increase an athlete's chances of injury during life stress (Stowe, 2015). Beyond that, the way that athletes perceive and appraise their situation during injury can be seen to have a more of a potential impact on recovery over the injury itself (Tracey, 2003). Fear of reinjury may lead to an excessive stress response in turn making re-injury more probable than without (Andersen & Williams, 1988). This can play a large role in understanding the emotional responses of an athlete, such as, depression reinjury anxiety, and grief (Sheinbein, 2016).

Reinjury anxiety is associated with psychological changes including a lack of concentration and self-confidence, as well as an increase in distractibility and pain awareness (Sheinbein, 2016). The idea of how long re-injury anxiety or performing to pre-injury levels lasts for athletes is something still being studied (Podlog, Dimmock, & Miller, 2011). Researchers have stated that athletes who experienced more reinjury anxiety, and experienced it more frequently, refused to believe the reality of the situation, hoped and wished that things would get better, and had a greater tendency to focus on and express their distress (Wadey, Podlog, Hall,

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Hamson-Utley, Hicks-Little, & Hammer, 2014). Common indicators for an athlete having re-injury anxiety are that they may be experiencing heightened negative emotions at the completion of rehabilitation, malingering effects that delay recovery process, or hesitation in performing sport specific drills and tests that the athlete is physically capable of (Podlog, et al, 2011). Along with the psychological effects, there can also be physical effects from the reinjury anxiety, including over arousal, shown in increased heart rates, some muscle tension, and guarding the injured site (Sheinbein, et al, 2014). During this return to sport phase, an athlete can report concerns over athletic abilities, the possibility for re-injury, and the pressures to return to competition (Fernandes, et al, 2014). Athletes who have re-injury anxieties could have negative impacts on post-injury performances (Podlog, et al, 2011). If an athlete has not recovered enough to be physically and psychologically able to return to sport and does return, the chance of re-injury is high (Andersen & Williams, 1988). That fear of reinjury can lead to an athlete distrusting the injured site, which can then produce some hesitation for performance not only during the rehabilitation process, but also when returning to training and competition (Sheinbein, 2016).

Additionally, athletes may fear and be uncertain about the ability to reach pre-injury levels and then achieve future aspirations (Podlog, et al, 2011). With these concerns, research has also shown that athletes perceive the idea that emotional expression could have a negative impact on the athletes return to sport (Wadey, et al, 2014). Some athletes have expressed inappropriate and insufficient social support during this transition time (Fernandes, et al, 2014). Different studies have been done and resulted in the understanding that the need for informational support from coaches and medical team is the most important type of social support during the transition back to play, in order to help avoid a premature return and help cope with the related difficulties

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during the time (Fernandes, et al, 2014). Along with this, athletes should be aware of their performance and needs, if substandard it can lead to decrease in coordination, muscle tension, and bracing or splinting which can leading to a higher risk of reinjury (Sheinbein, 2016).

Of particular concern is a premature return to sport by an athlete feeling pressured, leading to a higher chance of reinjury (Fernandes, et al, 2014). Pressures to return to sport can come from coaches, teammates, or training partners before an athlete is mentally or physically ready, especially for competitive athletes, but the pressures can also come from the athlete themselves (Podlog, et al, 2011). Research has shown that athletes may shorten their recovery due to an increasing lack of confidence in their ability to perform their skills, concerns about feelings of isolation, or concern that they are losing too much fitness, thus leading them to return to play prematurely (Podlog, et al, 2011). Higher levels of appropriate social support can lead to lower levels of rejection and devastation, leading to a better and more timely return (Rees, et al, 2010). Coaches, managers, sport medicine practitioners and all other members of an athlete's sport medicine team should be aware of athlete tendencies towards self-imposed pressures to return to sport and create a plan for appropriate intervention efforts to be taken (Podlog, et al, 2011). Coaches, teammates and family are all people who play a role in the athlete feeling these pressures, as are the athletes themselves through unrealistic expectations (Fernandes, et al 2014). In more recent years, elite athletes have been seen to be under increasing pressure to make quick and timely full recoveries following an injury (Podlog, et al, 2011). The sports medicine team should be aware of these pressures and help the athlete return only when they are both physically and psychologically ready to return to play (Fernandes, et al, 2014). These pressures have been shown to easily influence an athlete's decision to play while in pain or to return prematurely from an injury (Podlog, et al, 2011). Throughout the entire transition phase, coaches should

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continue to provide social support through encouragement, positive feedback and sport-specific advice, especially when athletes perform poorly or have an injury related setback (Fernandes, et al, 2014).

Limitations

To date, many of the previous studies are limited based on the size of their samples (Tracey, 2003; Day & Schubert, 2012; Yang, et al, 2010). One study in particular looked at only elite level gymnasts within Brazil, this then limited the data they could collect and conclusions specific to the training in Brazil alone (Codonhato, Rubio, Oliveira, Resende, Rosa, Pujais, & Fiorese, 2018). Another study reported that the size of their data sample was smaller because of the 2-year collection time frame, in which many participants were removed due to different circumstances (Turner, Langdon, Shaver, Graham, & Naugle, 2017). Another limitation that was discussed was the overall demographics of the participants; one study only studied white male participants and a few only studied female athletes (Codonhato, et al, 2018; Day & Schubert, 2012; Yang, et al, 2010). Therefore, greater sample sizes, covering both male and female athletes from a variety of sports and levels is warranted. One other limitation that can be seen is that there is no distinct healthy base line data (Turner, et al, 2017). One last concern and limitation can come from the fact that much of the research is based on athlete perception (Yang, et al, 2010). With no empirical evidence behind perception, the data can be limited and biased based off the sample size, gender, and sport, leaving room for differences among samples.

Future Directions

Research is continually needed within the realm of social support before, during, and after sport injury. The focus on re-injury anxiety is something fairly new to sport psychologists

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and is something that needs further discussion and study (Podlog, et al, 2011). Beyond this, research should be conducted to examine and help determine a successful return to play versus and unsuccessful return to play (Podlog & Eklund, 2006).

Research has shown that athletic trainers play large roles within an athlete's social support network, but do not receive formal training on how to help athletes psychologically (Yang, et al, 2014). With this, educators, researchers, and athletic trainers may find it beneficial to receive formal training on how to psychologically aid athletes during their recovery and return to play time. Through this, athletes may have better access to resources for coping and creating a return to play plan for the best chance for no re-injury and performing or reaching aspirations.

Additionally, future research should include greater sample sizes. Research should include athletes from various backgrounds, including race/ethnicity, socioeconomic status, and access to athletic trainers. Beyond that, research needs to further explore the impacts of sport type, age, gender, and sport level. Including these variables in future studies can help garner more generalizable findings on the importance of social support before, during, and after injury, as well as during the return-to-play process.

Conclusion

Overall, the main purpose of social support during injury rehabilitation is to help the athlete have a sense of belonging and assurance, which in turn helps them to understand they are not isolated because of an injury and then give them a support network to help guide and encourage them along the way (Arvinen-Barrow & Pack, 2013). Research has suggested the idea that "injury is a social process" and through exchanges and perception of social support from the athlete, it may determine how well the athlete can cope and recover (Rees, et al, 2010). Research

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overtime on examining social support in the area of sport-injury has focused on the cause of injury, rehabilitation, and full recovery from injury and return to sport (Stowe, 2015). During the rehabilitation phase, social support can be used to help an injured athlete interpret the injury into something less stressful than they make it out to be, helping to reduce the stress following an injury (Yang, et al, 2014). Studies have shown that athletes with healthier minds tends to recover quicker from injury (Sheinbein, 2003). The recovery process has been called an active process rather than a passive process involving different tasks the athlete must engage in and work through (Tracey, 2003).

Injured athletes have consistently reported concerns about maintaining their identities as an athlete through feelings of social dislocation from the life alongside teammates, coaches and training partners throughout their recovery process (Podlog, et al, 2011). Along with this, an athlete can be in need of different types of support throughout the process (Arvinen-Barrow & Pack, 2013). Emotional, informational, and tangible support are the three main types of social support studied by sports psychologists (Weinberg & Gould, 2019). The success of all this relies on the perception of the athlete (Yang, et al, 2010). Social support is demonstrated to be one of the most important and influential parts of the recovery process (Yang, et al, 2014). From this, researchers have focused on this idea that social support should come from various sources. The lack of social support for an athlete can be seen as a stumbling block in the emotional recovery from injury (Tracey, 2003). Athletes have reported that with more social support from athletic trainers and others they are less likely to experience adverse symptoms like depression or anxiety (Yang, et al, 2014).

Research gives support to state there should be a difference in care and support systems to meet the needs of both male and female athletes (Yang, et al, 2010). An understanding that sex

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differences in social support patterns as well as the effect of injury on the patterns is important to being able to provide the more effective social support to both male and female athletes (Yang, et al, 2010). Beyond understanding that, the sports medicine team should also be aware of athlete tendencies when preparing to return to play (Podlog, et al, 2011).

Beyond all the present research there are still limits to it all, like small sample sizes or biased sample sized. There is also space for future research and education for all members of the sport medicine team to help an athlete be successful throughout injury, recovery, rehabilitation and return to play. This paper has reviewed, and synthesized current literature focused on the role of social support throughout the entire injury process, and provided limitations, as well as areas for future learning and education.

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