

The management of elite athletes' returning to play: a multidimensional perspective

Anna Martirosyan
Yerevan State University branch of Ijevan, Yerevan, Armenia

ABSTRACT

The management of elite athletes' returning to play: a multidimensional perspective

Anna Martirosyan

Returning to sport after an injury can be a difficult process for competitive elite athletes.

The purpose of this study was to examine the experience of competitive elite athletes returning to sport after an injury in order to identify critical, and possibly new, factors which can help them to recover and return to play as soon as possible. A number of factors have been identified by several researchers. These factors include medical, physiological, emotional and others. The literature also highlighted the importance of social support, which includes support from people around athletes, such as family, friends, coaches, trainers, teammates and so on.

Through this research I wanted to find the most important and helpful to athletes factors.

The data of this retrospective qualitative study were collected through interviews. Eleven elite athletes, from six countries and different kind of sports took part in this research. Athletes were interviewed through semi-structured interview and asked to answer some questions and share their experience of recovery from sports injury and returning to play.

The collected data were analyzed through the coding method. All similar answers were put together and finally key factors for athletes' recovery and return to play were identified.

This study confirmed the accuracy of a number of helpful factors for athletes' recovery and return to play which were already known from literature. Moreover the study discovered several new and key factors, like support from government, sport organization employees, and athletes' own motivation to achieve their goals. The sport manager should pay attention to all these factors when he or she is planning a recovery program for the injured athlete.

Keywords: Sport, Olympic Games, injury, management, recovery.

АННОТАЦИЯ

Менеджмент возвращения в спорт элитных спортсменов: многомерная перспектива

Анна Мартиросян

Возвращение в спорт после получения травмы может быть сложным процессом для спортсменов высокого класса.

Цель исследования – изучить опыт возвращения в спорт элитных спортсменов, получивших травмы, выявить ключевые и возможно новые факторы (среди них – медицинские, физиологические, эмоциональные и др.), которые могут помочь спортсменам быстрее восстановиться. В литературе также подчеркивается важность социальной поддержки со стороны семьи, друзей, тренеров, партнеров по команде и т. д.

Данные этого ретроспективного качественного исследования были получены посредством интервью. В исследовании приняли участие одиннадцать элитных спортсменов, специализирующихся в разных видах спорта, из шести стран. Интервью было структурировано и включало вопросы об опыте восстановления спортсменов после травм и процесса возвращения в спорт. Данные были проанализированы с помощью метода кодирования. Все схожие ответы объединялись, что позволило определить ключевые факторы, позволяющие спортсменам восстановиться после травм и вернуться в спорт высших достижений.

Исследование подтвердило точность ряда полезных для восстановления спортсменов и возвращения в спорт факторов, которые уже были известны из литературных источников. Кроме того, выявлено несколько новых и ключевых факторов, таких, как поддержка со стороны правительства, работников спортивных организаций, собственная мотивация спортсменов для достижения поставленных целей. Спортивный менеджер должен учитывать указанные факторы при планировании программы восстановления травмированных спортсменов.

Ключевые слова: спорт, Олимпийские игры, травма, менеджмент, восстановление.

Introduction. Sport in today's society is more popular than probably ever imagined. Large numbers of athletes participate in a variety of youth, collegiate, high level, professional and recreational sports. As sport becomes more of a fixture in the lives of people, a burden of responsibility to understand the risk of injury and the process of recovery and return to play falls on the shoulders of the various specialists, such as managers, coaches and clinicians.

Generally, about half of all athletes are injured sooner or later, about 10 % – seriously. In the past, it has been averaged 18 deaths each season [9].

Sport injury was an issue as far back as ancient Greece and Rome. During the gladiatorial battles and Olympic Games, when the warriors and athletes were injured, specially trained doctors or healers treated them by methods, which in those days are not known for all [10]. The problem of sports injuries is still important. It is crucial from many aspects, including economic, social, political, environmental, and psychological ones. This happens because injury influences not only an athlete's health but also his or her quality-of-life, psychology, environment, professional position and economical point. Thus, it is important to understand factors that impact on athletes' returning to play.

Several researchers tried to find a number of factors, which can help athletes to recover and return to sport, moreover to warn against injury [8]. Most researchers examined medical and some of them psychosocial factors' affecting athletes' recovery from sport injury and returning to play.

But are these factors really enough for full and fast recovery? And which are the most important to focus on?

Literature review. During the past few decades researchers [e.g., 2, 4, 5, 11] through the qualitative and quantitative investigations tried to find a number of important factors which help athletes during their recovery and returning to play. Some of them [3, 4, 17, 18] paid attention to psychological and emotional factors, which in their judgment were the most important factors in athletes' recovery and returning to play. Others mentioned about social support [1, 14], which is not the least of factors. In her research about social support, Bianco [1] interviewed Canadian national team alpine skiers, who shared their experience of social support. All interviewed skiers mentioned that the support received from Ski Team Administrators (STA) had a significant impact on the skiers' concerns about the future. In overall context Bianco [1] also mentioned about support of family, which was helpful in some cases.

The coaches indicated that goal setting and the use of a role model were of no small importance [14].

Although no research has examined this factor, the existence of sport organization policies regarding financial assistance for injured athletes suggests it is an important factor in their recovery. Such policies seem to be particularly evident in North America (Canadian Heritage, 2012, Section 9). Apart from the North American case, some of

the Armenian National Federations have policy for injured athletes [20].

Despite these forms of financial support for injured athletes, research has yet to examine or uncover the importance of such financial aid in elite athletes' successful recovery.

The aim of research. The purpose of this research was to examine elite athletes' experience in returning to play after sports injury. The intent was to find more information about factors which helped them to recover and return to play and why not, to discover new important factors for fast recovery and return to play.

Significance and Justificatio. The feature of this study is that I tried to put all helpful factors together and discover the main one which can have an impact on elite athletes' recovery and return to play. Also this study is unique or specific because this research took part with eleven elite athletes from six countries and different kind of sports, and all of them had Olympic Games experience, even some of them more than one time.

Methods. Qualitative research method was used for this study [16]. I used purposive sampling which focuses on selecting information-rich cases whose study will illuminate the questions under study. This sampling is sometimes called purposeful or judgment sampling [12].

Study participants were from the Armenian National Olympic team and the students attending the Russian International Olympic University who were former elite and Olympic athletes.

Eleven (7 male, 4 female) elite athletes from six countries and different kinds of sports, aged 23 to 32 years took part in interviews (Table 1). For more confidentiality interviewed athletes were given numbers from I to XI.

Data collection. To collect data for this study I used the interview method; specifically semi-structured interviews to ensure some consistency. This meant that questions were open-ended but based on a predetermined list of topics.

The data collection methods for my study involved the literature review of sports injury rehabilitation and return to play, and interviews collection from eleven elite athletes. The aim of literature review was to find out the main factors which can help athletes to recovery from injury and return to play. For that were analyzed more than twenty relevant articles. The purpose of the interview was to verify the truthfulness of the facts in practice. Moreover, to try to find new factors, which can also have an impact on athletes' recovery and return to play as soon as possible.

An interview guide was developed based on relevant literature on return to play, return to work [13], social support [1], psychological support [3], and qualitative interview techniques [7, 12].

In these interviews were asking some demographic questions, which aims were to identify characteristics of the person being interviewed. These questions are including age, gender, and education. Other questions were about experience, opinion and knowledge of participants.

TABLE 1. Participants' demographic details

Athletes	Gender	Age (years)	Sport
I	Male	27	Alpine Skiing
II	Male	23	Skiing
III	Male	24	Skiing
IV	Female	31	Weight-lifting
V	Male	28	Wrestling
VI	Male	24	Wrestling
VII	Female	30	Swimming
VIII	Female	31	Ice hockey
IX	Female	24	Rhythmic gymnastics
X	Male	32	Taekwondo
XI	Male	28	Track and field

All athletes were interviewed one-on-one. All interviews were typed on a word document.

During the interview athletes were asked three general questions to get information about them and eight special open questions with the aim to identify the main factors which helped them to recovery and return to play.

Data analysis. "The complete analysis isn't".

From Halcolm's *Iron Laws of Evaluation Research* [12].

For analyzing of collected data was used inductive content analysis through a process as open coding [7]. I also used inductive analysis looking for patterns across participants.

For analysis some of data I used open coding which is based on known themes. For example, for question number 5 and 6 which was about (1) factors that help and (2) factors that hinder elite athletes to recover and return to play (see Table 2).

For analyzing the interviews some general questions were combined (i.e. age, gender) and analyzed together through the data display method (see Table 1). It also was done for questions 1 to 4 (see Table 3). In order to get a general idea about the study's participants was calculated

TABLE 2. People who help or hinder athletes to recover and return to play

Athletes	Medical Staff	Coach	Teammates	Team/club employees	Government (NFs, NOCs head)	Family
I	Help	Help	-	-	-	Help
II	Help	Help	-	-	Help	Help
III	Help	Help	-	-	-	Help
IV	Hinder	-	-	-	Help	Help
V	Help	Help	Help	Help	Help	Help
VI	Help	Help	Help	-	Help	-
VII	Help	Help	-	Hinder	Help	-
VIII	Help	-	Help	Help	Help	Help
IX	Help	-	-	Hinder	Hinder	Help
X	Help	-	-	-	Help	Help
XI	Hinder	Help	Help	Help	Help	Help

a range and average years of training, injured and away from training and competition. Also was reviewed a variety of injuries experienced by the interviewed athletes. All answers of questions number 5 and 6 were reviewed and summarized. For question number 7 was created a table and also used summary and some quotes. All answers of question number 8 were reviewed and summarized and gave some worthwhile quotes.

Results. For the study were interviewed 11 former and current elite athletes. As shown in Table 1, I interviewed four (36.4 %) female and seven (63.6 %) male athletes, age from 23 to 32 years (average age 27.45), from six different countries and nine kind of sports. Home country is excluded in order to protect confidentiality.

In the interview the participants were also asked to (1) describe the type of injuries they had experienced, (2) how long they are participate in sport, and (3) how long they had been away from sport (either training or competition). The information is provided in Table 3.

The athletes who took part in this study had or have been training from 10 to 20 years (average – 14.7 years). They had different kind of injuries, but mostly muscle

TABLE 3. Range of training years, variety of injuries, duration of injury and time away from professional practice

Athletes	Training, years	Kind of injury	Duration of injury, weeks	Time away from practice or competition, weeks
I	15	ACL rupture	24	24
		MCL rupture	2	2
		Concussion	4	6
II	14	Back pain	2	2
		Hip muscles strain	2	-
III	13	Hip muscles strain	8	-
IV	15	Foot fracture	12	10
		Arm fracture	20	4
V	15	Foot fracture	12	12
		Ribs fracture	8	6
VI	12	Muscles strain	8	-
		Foot fracture	48	24
VII	20	Shoulder's muscles strain	1	-
		Back pain	72	-
VIII	13	Herniated discs	Till now	-
		Brow fracture	2	-
		Arm and wrist fracture	36	24
IX	15	Hip and foot injuries	4	-
		Back pain	12	-
X	20	Arm fracture	4	-
		Foot fracture	12	8
		Leg fracture	16	6
		Achilles tendon rupture	4	2
		Knockdown	4	4
XI	10	Hamstring strain	16	24

Note. ACL = anterior cruciate ligament; MCL = medial collateral ligament; Duration of professional outage = the amount of time when athletes were away from training and competition.

strains (45.5 %) and limb fractures (36.4 %). Two athletes (I and IX) had different kinds of injury (see Table 2). Athlete IX mentioned that her injuries were not identified by medical staff.

Duration of injuries was from 1 to 72 weeks (average – 14 weeks). All athletes (100 %) were away from training for some time, but not all of them were away from competition. Some of them (63.6 %) continued their career with injury. They were away from training and competition from 2 to 24 weeks (average – 15.3 weeks).

Factors Influencing Return to Play. The athletes were asked what factors helped them to recover from injury and return to play. It was an open question and the athletes identified whatever factors came to mind for them. They identified five factors: (1) medical support, (2) coaches' support, (3) family support, (4) personal sport goals, and (5) desire to help their team.

The athletes were asked to comment on whether particular individuals or groups helped or hindered their return to play. The purpose of this question was to find out whether there were influences the athletes had not thought of in the first two questions. Table 2 indicates athletes' responses to each of the individuals or groups.

Table 2 shows that 9 (81.8 %) of interviewed athletes got support/help from medical staff and only 2 of them (18.2 %) got nothing from medical staff.

Generally, 64 % of athletes emphasized their coaches' help, 36 % got help from teammates, 27 % mentioned about team/club employees. Coaches and teammates shared out their experiences, knowledge and motivated athletes return to play. Generally, 72 % of athletes told about government support which basically includes financial support and 82 % said that they got emotional support from their family during recovery and return to play.

In this case the research found not only one but a couple of factors which had almost the same importance for athletes. Thus, the athletes were asked to identify the most important factor for their recovery and return to sport. Mostly athletes (54.5 %) highlighted their own motivation to achieve their goals.

Two (18.2 %) athletes (I and VII) emphasized about adequate rest, a strict and structured rehabilitation program, proper nutrition, which helped them to recovery.

So, to sum it up, we can see that there are a number of factors which can help elite athletes to recover and return to sport as soon as possible. But on the other hand some of these factors can also hinder athletes' recovery and return to sport.

However reviewing all data, which were collected during this research, we can see that the most important factor for athletes (54.5 %) was their own motivation to achieve their goals, which helped most of them to recover and return to sport.

Discussion. This study was aimed to examine the experience of elite athletes and find the factors, which they believe helped them to recover and return to play after an

injury. The findings have implications for sport managers, who should pay attention to planning strategies to help elite athletes in this situation.

As noted in the literature review most of researchers mentioned about psychosocial factors, which helped athletes to recover and return to sport. Some of them [2, 17] highlighted emotional factors including positive and negative emotions and life stress. Others [1, 6, 14] noted about social support, which include support from family, coaches, and teammates.

In the current study young elite athletes with an average age of 27.45 years old took part. Analyzing all data, which I got from interviews I found the main factors, which were important and helpful for these elite athletes to return to sport.

The main factors, which they mentioned, are: (1) medical support, (2) coaches' support, (3) family support, (4) personal goals, and (5) desire to help their team. Some of these factors were already discovered and well known by other researchers.

This information is very important for sport managers, who are working with elite athletes to know all 'helpful' and 'unhelpful' factors for recovery. Knowing those factors can make it easier to manage the whole process of recovery more effectively and faster.

Athletes were also asked to identify any other individuals or groups which might help or hinder them and about which perhaps they did not mention. The results were more or less the same as in previous questions. The new factor which was discovered from this question was the importance of government help and support, and this was mentioned by 8 (72 %) athletes. I could not find something about the importance of government support in the relevant literature, and I think this shows that not all factors were discovered in previous researches. Based on this factor government should make special insurance for athletes, which will cover all cost of recovery.

Finally athletes mentioned the main factor, which they thought helped them to recover and return to sport. Basically all athletes emphasized the factors, which they mentioned before, but when I asked them to highlight the most important and the most common factor, over half of the athletes (6, 54.5 %) mentioned their own motivation to achieve their goals. Other athletes' opinions were divided. They mentioned about structured rehabilitation program, rest, again about medical staff, coach and team.

Conclusion

Knowing the main factors, which can help elite athletes' to recover from sport injury and return to play by the sport organization (e.g., club, team) manager can help to plan and monitor athletes' recovery and return to sport strategy. From literature review I found a number of factors which can help elite athletes to return to sport. But I thought, these factors, could not be the only ones, which should help athletes. I interviewed eleven elite athletes and found several factors, on which the sport manager should

pay attention before planning the recovery and returning to training program.

The interviewed athletes emphasized several factors which helped them to recover and return to play. First, the athletes identified five important factors: (1) medical support, (2) coaches' support, (3) family support, (4) personal sport goals, and (5) desire to help their team. These main factors helped athletes to recover and return to sport. Some of these factors were already known from the reviewed literature.

Nevertheless I found other helpful factors, which were not discovered at all or were discovered in overall context from other researchers. The first factor, which was important for recovery of participant of this study is support from government, which includes financial support. This should be important for sport managers, because based on this finding they can create special policy for injured athletes, which should cover the cost of their recovery and return to play. Most athletes mentioned about support of team and club employees. This finding also is new because in the literature, which I reviewed there was nothing about this kind of support. You can see that I found not only one but a couple of important factors, which helped athletes to recover and return to play. This means that sports ma-

nager, who plans and monitors recovery and return to play program for injured athlete should be careful and take into account all factors, which can have impact on it.

The final question asked athletes to indicate the most important factor for their recovery and return to play. Most of them highlighted, that it was their own motivation to achieve their goal.

The findings have answered the question of this study, which was to find the most important factor which can help elite athletes' to recover from sport injury and return to play. These factors should be a guide for sport managers during the planning of athletes' recovery and returning to sport.

Future research in the area needs to include more participants from both team and individual kinds of sport, and maybe compare the factors they identify. It may also be interesting to compare the factors identified by male versus female athletes. The findings of such research can help the sport manager to develop even more specific return to play strategies for athletes. Also research should include primary data collection yielding responses from coaches, trainers, teammates, family members, of course from sport managers and other people around recovering athletes. This will help to understand and manage even more effectively elite athletes' recovery and return to play.

■ Литература

- Bianco T. Social support and recovery from sport injury: Elite skiers share their experiences. *Research Quarterly for Exercise and Sport*. 2001; 72(4), 376-388 ProQuest.
- Brewer BW, Williams JM. Psychology of sport injury rehabilitation. In Singer RN., Hausenblas HA, Janelle CM. (Eds.). *Handbook of sport psychology* (2nd ed.), New York, NY: John Wiley & Sons; 2001. p. 787-809.
- Brewer BW, Andersen MB, Van Raalte JL. Psychological aspects of sport injury rehabilitation: toward a biopsychosocial approach. *Medical and Psychological Aspects of Sport and Exercise*. 2002;38:41-45.
- Cupal DD. Psychological interventions in sport injury prevention and rehabilitation. *Journal of Applied Sport Psychology*. 1991;10:103-123.
- Davis JO. Sports injuries and stress management: an opportunity for research. *Sport Psychology*. (1996); 5:175-182.
- Duda JL, Smart AE, Tappe MK. Predictors of adherence in the rehabilitation of athletic injuries: An application of personal investment theory. *Journal of Sport & Exercise Psychology*. 1989;11:367-387.
- Edwards A, Skinner J. *Qualitative research in sport management*. Oxford, Elsevier Ltd; 2009.
- Guskiewicz KM, Bruce SL, Cantu RC, Ferrara MS, Kelly JP, McCrea M, Putukian M, Valovich McLeod TC. National athletic trainers' association position statement: Management of sport-related concussion. *Journal of Athletic Training*. 2004; 39(3):280-297.
- Horine L, Stotlar D. *Administration of physical education and sport program*. — Waveland Press, 2013.
- Jackson R, Hughes B. *Sport administration manual: Olympic Solidarity (Section I – The Olympic Movement, unit1- The Ancient Olympic Games)*. Calgary, McAr Printing Limited; 2001.
- Kerr G, Goss J. The effects of a stress management program on injuries and stress levels. *Journal of Applied Sport Psychology*. 1996; 8:109-117.
- Patton MQ. *Qualitative research & evaluation methods*. 3rd ed. California, SAGE Publications, Inc.; 2002.
- Petrie K, Weinman J, Sharpe N, Buckley J. Role of patients' view of their illness in predicting return to work and functioning after myocardial infarction: longitudinal study. *British Journal of Medicine*. 1996;312:1191-94.
- Podlog L, Dionigi R. Coach strategies for addressing psychosocial challenges during the return to sport from injury. *Journal of Sport Sciences*. 2010;28(11):1197-1208.
- Podlog L, Dimmock J, Miller J. A review of return to sport concerns following injury rehabilitation: Practitioner strategies for enhancing recovery outcomes. *Journal of Physical Therapy in Sport*. 2011;12:36-42.
- Suter NW. *Introduction of educational research. A critical thinking approach* (2nd ed.). California, SAGE Publications, Inc.; 2012.
- Tracey J. The emotional response to the injury and rehabilitation process. *Journal of Applied Sport Psychology*. 2003;15(4):279-293.
- Wiese-Bjornstal DM, Smith AM, Shaffer SM, Morrey MA. An integrated model of response to sport injury: psychological and sociological dynamics. *Journal of Applied Sport Psychology*. 1998;10:46-69.
- Sport Canada. *Athlete Assistance Program Policies and Procedures*. Public Works and Government Services Canada; 2012. Catalogue No. CH24-11/12-2012E-PDFISBN 978-1-100-212098.
- The Statute of Football Federation of Armenia, article 2, 3; 2012: <http://www.ffa.am/en/regulations>

Автор для корреспонденции:

Мартirosян Анна — кафедра педагогики и психологии, Ереванский государственный университет, Иджеванский филиал; Армения, 0002, Ереван, ул. Пушкина, 5б; <http://orcid.org/0000-0002-2599-510X>
martirosyan-1991@mail.ru

Corresponding author:

Martirosyan Anna — Department of Pedagogy and Psychology, Yerevan State University branch of Ijevan; Armenia, 0002, Yerevan, 56 Pushkini Str.; <http://orcid.org/0000-0002-2599-510X>
martirosyan-1991@mail.ru

Поступила 11.10.2018