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Attitude and Experience Level of Exercise Specialist in Addressing Psychological Issues during Sports Rehabilitation

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ABSTRACT

The purpose of this study was to determine the frequency with which exercise specialist address certain psychological issues related to injury and non-injury related psychological issues with their athletes or patients, their attitude to deal with psychological issues, and referral patterns to other mental health professionals. A hundred clinical exercise specialists who educate exercise rehabilitation of the injured athletes were participated and data from 60 persons were analyzed. Statistical analyses were performed using SPSS (version 18.0 for windows). Exercise specialist (ES) group reported frequently encountering psychological issues more related to injury than unrelated to injury in athletes and patients. Furthermore, ES believed it was their role to address injury more than non-injury-related psychological issues with athletes and patients. Less experienced ES reported slightly less competent and much less comfortable with psychological skills than more experienced ES. The current findings suggest that ES encounter and discuss psychological issues during rehabilitation frequently. Clinical implications regarding the dealing with psychological issues during the rehabilitation were discussed.

1. Preface

It is quite common for athletes to be injured during training and competitions. While the magnitude of the injury varies from trivial damages to serious ones, regardless all desire a quick recovery. Exercise specialists (ES) are professionals who play the most crucial part in the rehabilitation and return to training on the part of the athletes. Thus, they must attain professional knowledge and skills to aid in effective recovery, and make use of them on site appropriately.

The athletes find it difficult to concentrate in the tedious and painful course of rehabilitation, and sometimes face psychological difficulties. It has been repeatedly found in numerous studies that injured athletes go through emotional trials (Ardern et al., 2012). After the injury and during

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rehabilitation, many of them suffer a considerable amount of psychological difficulties including nervousness, low self esteem, depression and anxiety (Smith, 1996). In addition, it was reported that the recovery of the athletes depends on their management of stress related to their physical damage (Crossman, 1997). It was also reported that negative emotional responses occur not only in immediate proximity to the time of damage or rehabilitation, but also upon full recovery and return to the sports world (Morrey et al., 1999).

To aid the successful rehabilitation of athletes, the emotional difficulties they experience must be monitored and managed continually during the process. Furthermore, for them to concentrate on the process and address their own psychological difficulties, an expert in psychology may be necessary. But on domestic (Korean) grounds the athletes, while active in seeking physical rehabilitation from related professionals, show themselves passive in finding a psychological expert. Thus, the ES, who spend the most time with the athletes and aid their recovery firsthand, often manage their psychological stress as well. There are various ways for ES to address the emotional needs of their subjects, starting from offering support, providing the necessary information, and consulting an expert in the related field. In many studies, it is reported that due to the emotional bond between the athlete and the ES, he is in an ideal position to offer support (Cramer Roh & Perna, 2000; Moulton, Molstad, & Turner, 1997). In addition, it is proposed that ES equip themselves for the addressing of not only the psychological aspects related to injury and rehabilitation but also ones unrelated (Cramer Roh & Perna, 2000).

Since these specialists play an important role in aiding not only the bodily rehabilitation but also the psychological, needs examining are to what extent they possess the professional knowledge to address the emotional difficulties which the athletes experience in the process, how accomplished they are in real life application of such knowledge, and what attitude they have about assuming the role of a psychological supporter of athletes.

Stiller-Ostrowski and Ostrowski (2009) recommend in their study that within the educational program, exercise specialists must be equipped with communication skills and human relation skills which could motivate athletes. They also reported that the specialists showed the most confidence in consulting for rehabilitation, injury prevention and nutrition.

Furthermore, they report that these specialists are ready for various contents and situations of consulting, the offering of psychological-social support, and the seeking of aid from a professional in psychology (Stiller-Ostrowsky & Ostrowski, 2009).

Biviano (2010) reported, in a study considering 311 exercise specialists, that they take care of emotional issues not only injury-related, but ones not related as well.

Also, it was reported that these specialists believe that it is their role to address also the hardships unrelated to the injury. Yet they seemed uncomfortable and less confident in addressing such difficulties. Also, those who were confident and comfortable with the taking care of emotional difficulties of athletes seemed to be ready comparatively to consult a related professional (Bivian, 2010).

Hamson-Utley, Martin and Walters (2008) reports that in a study regarding athletic trainers (AT) and physical therapists (PT), both had a positive attitude on the effects of psychological skills, and believed that these skills brought forth desirable outcomes for the rehabilitation. Also, it appeared

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that the ATs and PTs who reported themselves as having been in psychological training or showing interest in it showed a more positive attitude on the effect of psychological skills (Hamson-Utley, Martin, & Walters, 2008).

As can be seen from the preceding examples, while research and discourse on the attitude of the ES on the handling of emotional aspects and their expertise in the area are being done actively in foreign grounds, in domestic grounds such research is lacking. It can be expected that ES who watch the process of rehabilitation intimately and offer help firsthand have influence on the athletes. Thus, a detailed analysis on their familiarity and expertise of on-site usage of professional knowledge and skills needs to be done. In particular, since the outcome of the rehabilitation depends on the exercise specialist's stance on the matter and the level of expertise which he has in tending to emotional issues, research on related areas is necessary. Also, since there are a variety of hardships which the athletes suffer in differing intensities, research needs to be done on whether the specialists are aware of their problems and the seriousness of the issues, and whether they are taking adequate measures or consulting other experts. Thus, the present study aims to grasp how the ES are responding to the emotional difficulties of the athletes and the position they assume on providing psychological aid.

2. Research Methodology

2.1 Research Subjects

One hundred ES who were in charge of clinical rehabilitation of athletes were chosen randomly, and after their signing the agreement in voluntary participation on the research, a survey was conducted. The survey text was distributed both online and offline.

Upon distribution, a total of 60 members agreed to the conducting of the survey and answered the questions, and their data was subjected to analysis. Among subjects 48 were male (80%) and 12 were female (20%). The average age of subjects were 30.15 (5.58) years. Examining the certification of the subjects, it was found that 21 (35%) possessed certificates from the KACEP and the Personal Trainer certificates from NSCA each, respectively, forming the majority. Soon followed 11 (18.3%) who had Athlete's Trainer Certificates from KATA, 3 (5%) who had National Sport Coaching Certification, and 4 (6.7%) who had no certificates at all. Examining their career, it was found that there were 37 (61.7%) who had worked 1~5 years, 13 (21.7%) who had worked 6~10 years, and 10 (16.7 %) who had worked 10~15 years.

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Table 1. Attributes of Participants

Attributes	A total of 60 (SD), (%)	
Sex	Male	48(80%)
	Female	12(20%)
Age	30.15(5.58) years	
Career	1~5 years	37(61.7%)
	6~10 years	13(21.7%)
	10~15 years	10(16.7%)
Certificate	Exercise Specialist	21(35%)
	Personal Trainer	21(35%)
	Athletic Trainer	11(18.3%)
	Sport Coaching	3(5%)
	No license	4(6.7%)

2.2 Measurement Variables

A survey made for the present research was distributed. The design of the survey was done by a sports expert and a psychological expert, and 21 questions were selected. The specific contents of the survey were composed of many kinds of questions. One of them were questions which asked to what extent the exercise specialists were addressing the emotional stress of the athletes, such as “In general, how often do you have discussions about the emotional, mental and behavioral difficulties related to injury with your subject?”. The other were questions which had to do with the specialist’s attitude in tending to the emotional stress of athletes, such as “To what extent do you agree that your role and responsibility is to discuss the emotional, mental and behavioral problems related to their injury?”. Also, questions which asked how the stress unrelated to the damage or rehabilitation was being addressed, were included. The survey participants were given options between a scale of 1 (Very often, strongly agree, very effective) to 5 (Never, not at all, not sure at all).

2.2.1 The Handling of Data

In this research, in order to see what kind of position ES have in handling and responding to various emotional difficulties and whether they are intervening effectively, a paired T-test was conducted. Also, to find the difference in attitude and accomplishment according to the length of career, an independent T-test was carried out.

2.2.2 Result

The Response and Stance of the ES according to the Categories of Psychological Difficulties

Analysis was done on the attitude of the exercise specialists in addressing the emotional difficulties

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related or unrelated to injury respectively, and whether an effective intervention was being done in each case; the result is presented in Table 2. The participants appeared to care for difficulties related to injury more often than those unrelated, [$t\,(59)=-5.59$, $p<.001$]. It also seemed that the specialists thought they were the only consultants concerning the athlete's emotional difficulties due to injury, [$t\,(59)=-3.49$, $p<.001$].

In addition, the specialists seemed more comfortable addressing emotional difficulties directly related to injuries, [$t\,(59)=-2.01$, $p<.05$], and felt that they could more effectively treat them than those unrelated, [$t\,(59)=-4.13$, $p<.001$]. Lastly, they felt more responsibility for difficulties closely related to injuries, [$t\,(59)=-2.96$, $p<.01$].

Table 2. The analysis of attitude and professional maturity of the ES according to psychological appeals

Contents		Average(SD)	*paired-t*
Conversation Frequency	Conversations with topics which are related to injury	2.12(.78)	-5.59^{***}
	Conversations with topics not related to injury	2.27(.94)	
Consultant	The only consultant for topics injury related	2.47(.77)	-3.49^{***}
	The only consultant for topics not injury related	2.82(.83)	
Comfortableness	Conversations with topics which are related to injury	2.25(.60)	-2.01^{*}
	Conversations with topics not related to injury	2.47(.65)	
Confidence	Conversations with topics which are related to injury	2.50(.75)	-1.73
	Conversations with topics not related to injury	2.62(.72)	
Effectiveness	Conversations with topics which are related to injury	2.38(.69)	-4.13^{***}
	Conversations with topics not related to injury	2.75(.60)	
Responsibility	Conversations with topics which are related to injury	1.85(.55)	-2.96^{**}
	Conversations with topics not related to injury	2.10(.63)	
Interest	Conversations with topics which are related to injury	1.93(.61)	-1.92
	Conversations with topics not related to injury	2.08(.70)	

$^{***}p<.001$, $^{**}p<.01$

2.3 Responses and Attitude Depending on Length of Career

In order to see whether there is a difference in addressing emotional difficulties according to length of professional career, ES were divided into two groups, one with ES who had worked less than 5 years and the other with ES who had worked more than 6 years, and the results were analyzed. Difference between tending to emotional appeals injury-related and tending to those not related were evaluated, whose outcome is shown on Table 3 and Table 4.

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Table 3. Responses and attitude for emotional appeals related to injury depending on experience

Contents	A career of less than 5 years N=37 average(SD)	A career of more than 6 years N=23 average(SD)	t
Conversation frequency	2.11(8.43)	2.13(.69)	-1.06
The sole consultant	2.59(.73)	2.26(.81)	1.66
Comfortableness	2.32(.53)	2.13(.69)	1.22
Confidence	2.57(.69)	2.39(.84)	.89
Effectiveness	2.41(.60)	2.35(.83)	.31
A sense of responsibility	1.78(.48)	1.96(.64)	-1.19
Interest	1.97(.52)	1.87(.72)	.64
Interest in psychological training	1.92(.55)	1.83(.72)	.57
The taking note of psychological skills	3.16(.60)	2.83(.65)	2.04*
Frequency of expert consulting	4.70(.62)	4.26(.96)	2.17*
Expert effectiveness	1.89(.57)	1.83(.65)	.41

* $p<.05$

Taking a close at the results which show the attitude towards the emotional appeal related to injury as shown in Table 3, the outcome showed that ES with careers of 5 years or less were less aware of the psychological skills than those with careers of 6 years or more, [t (58)=-2.04, $p<.05$]. Also, there were a higher frequency of the ‘seasoned’ group consulting a psychological expert upon the appeal of the athlete or patient, than those with less experience, [t (58)=-2.17, $p<.05$].

Table 4. The analysis of addressing and tackling of emotional appeals unrelated to injury according to experience

Contents	A career less than 5 years N=37 average(SD)	A career of more than 6 years N=23 average(SD)	t
Conversation frequency	2.59(.90)	2.87(1.01)	-1.10
The sole consultant	2.81(.88)	2.83(.78)	-.07
Comfortableness	2.46(.65)	2.48(.67)	-.11
Confidence	2.59(.64)	2.65(.83)	-.30
Effectiveness	2.70(.52)	2.83(.72)	-.77
A sense of responsibility	2.08(.60)	2.13(.69)	-.29
Interest	2.05(.71)	2.13(.69)	-.41

In order to find whether there were differences in dealing with emotional pleas not related to injury and the stance taken accordingly in regards to experience, the result was likewise analyzed with two groups of ES, divided into those who had worked 5 years or less and those who had worked 6 years or more. No meaningful difference was found between the two groups.

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2.3.1 Analysis of Topical Differences in Emotional Demands according to the Specialist's Experience

It was scrutinized whether there was a difference according to experience in the topic discussed by the ES with the patient or athlete in rehabilitation, and the results are shown in Table 5 and Table 6.

Carefully regarding the result in Table 5, ES who have more experience have more conversations with patients about the fear of another injury than those less experienced, [$t\,(58)=-2.57$, $p<.05$].

Table 5. Difference in topic due to emotional appeals related to injury according to the ES's experience

Contents	A career of less than 5 years N=37 average(SD)	A career of more than 6 years N=23 average(SD)	*t*
Fear of another injury	2.38(.76)	1.83(.89)	2.57*
Reluctance to take part in rehabilitation	2.78(1.11)	2.48(1.04)	1.06
Not being sure of being cured	3.22(1.11)	2.78(.85)	1.60
Doubt on returning to the level previously maintained after recovery	2.38(.98)	2.30(.82)	.30
Emotional discomfort according to damage	2.70(1.10)	2.74(.96)	-.13
Worries on the career in sports ending	3.05(1.08)	2.74(.92)	1.16
Worries on the long term effect of damage	2.62(1.06)	2.17(.78)	1.75
A sense of isolation	3.51(1.02)	3.35(.94)	.63
Nervousness regarding pain	2.35(.92)	2.00(.85)	1.48
Reliance on pain killers	3.84(1.07)	3.52(1.20)	1.06
Denying the seriousness of the damage	3.57(1.07)	3.09(.95)	1.77
Under-motivated for rehabilitation	2.92(1.19)	2.83(1.03)	.31
Worries on being incapable of tasks or participations in contests	2.57(1.09)	2.13(.92)	1.60
Worries on letting others down due to damage	3.03(1.12)	2.83(.94)	.72
The lapse of physical condition due to damage	2.68(.92)	2.70(.97)	-.08

* $p<.05$

In order to see whether there were topical differences according to experience on emotional appeals unrelated to injury, ES were divided into two groups, one with ES who had worked less than 5 years and the other with ES who had worked more than 6 years, and the results were analyzed. No meaningful difference was found between the two groups.

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Table 6. Difference due to the level of experience in conversational topics resulting from emotional appeals unrelated to injury

Contents	A career of less than 5 years N=37 average(SD)	A career of more than 6 years N=23 average(SD)	*t*
Depletion	3.35(1.09)	2.96(1.07)	1.38
Exercise addiction	4.03(.90)	3.52(1.08)	1.96
Diet	2.49(.90)	2.61(.94)	-.50
Weight and body image	2.22(.75)	2.52(.90)	-1.42
Depression	3.22(.98)	2.96(1.07)	.97
Anxiety	2.95(1.08)	2.48(.95)	1.71
Pressure	3.00(1.13)	2.52(.85)	1.75
Alcohol and substance related problems	3.76(1.09)	3.91(.95)	-.57
Problems with family and friends	3.19(1.02)	3.22(1.00)	-.11
Economical issues	3.49(.90)	3.35(.98)	.56
Anger management	3.57(1.04)	3.52(.90)	.17
Impulse management	3.54(1.00)	3.52(1.08)	.07
Self confidence	2.41(.90)	2.17(.94)	.96

3. Discussion

It is reported that 43.8% of the population taking part in sport activities in domestic spheres experience sports damage more than once per year (Kim et al., 2006). Although there were various developments on stadium facilities and the secureness of equipments, and improvements in coach leadership, sports damage prevention education and medical support, sport injuries were found to be increasing (Junge et al., 2007). As can be seen by these statistics, sport activities often entails physical damage and it is very important to aid in healthy recovery from these damages and the resuming of activities using the body. Since ES are on the frontline in facilitating the recovery of athletes or patients, all would agree that they serve a crucial role in rehabilitation. Thus it is quite important to examine whether the ES are well equipped with the knowledge and skills for rehabilitation, and whether they are taking appropriate use of these.

In particular, the process of rehabilitation is quite stressful for its subjects. It is reported that the injured athletes find it hard to concentrate in rehabilitation due to psychological issues (Duda, Smart, & Tappe, 1989; Meichenbaum & Turk, 1987; Udry, 1997), and that they experience negative feelings, expressing emotional discomfort such as depression or anxiety, or speaking of fear of additional damages and doubt on their capacity for playing upon returning to the field (Evans, Hardy, & Fleming, 2000; Tripp et al., 2007). Thus, rehabilitation must not focus merely on the bodily recovery of the damaged parts. ES at the site of the process must be fined tuned in noting the difficulties athletes and patients have while recovering, and respond appropriately.

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The present research aimed to learn what attitudes the ES had on emotional difficulties at the site of rehabilitation, and how they responded.

First, examining the handling of emotional pleas and the measures taken, it was reported that the ES more often addressed injury-related pleas than those unrelated, and was better equipped to handle the former. Also, they felt more responsible for injury-related pleas than for those unrelated. This conversely seems to stem from the fact that the subjects of rehabilitation more often confers their difficulties related to their physical damage, than those not related, with their ES. It is plausible that the athletes and patients would try to share their various mental difficulties, such as fear, pain and anxiety related to their physical recovery in the course of rehabilitation, with their ES who aid them in the process. Also, such emotional pleas can change within the rehabilitation process.

The subjects of the rehabilitation are said to experience differing mental states according to the rate of their recovery during the process (Kim, 2011). It was also reported that athletes who had experienced physical damages were better in overcoming emotional hardships than those who haven't, to a clinically meaningful level (Brewer & Petrie, 1995). Since psychological states differ as much as the bodily conditions vary throughout rehabilitation, emotional pleas related to injury can be made in different forms. Not only that, but the extent of emotional appeals can increase to a clinically meaningful level. Thus, ES must be ready to respond to various emotional needs of their subjects.

Biviano (2010) conducted a research on the confidence on the part of ES in addressing psychological difficulties with 170 ES as the subjects. It was reported that the ES often handle emotional pleas unrelated to injury as well as those related, and while lacking confidence in treating the former, felt that it was their responsibility to tend to them. Since these pleas are related to the mental health of athletes and the physical damage, and since stress is an important latent variable in causing damage (Maddison & Prapavessis, 2005), the ES must lend an ear to and be ready to address pleas on stress and emotional difficulties unrelated to injury.

Examining the analysis of the ES's awareness of psychological skills, inexperienced ES seemed less aware of the need for such skills applied in the rehabilitation process. This seems a result which reflects the fact that less experienced ES who were not educated appropriately find more difficulties in applying these skills rather than seasoned ES.

The research by Gordon et al. (1991) found that 84% of the ES in New Zealand and Australia found limitations in their ability to handle emotional pleas, and that 87% expressed their desire for more training in related areas. Hemmings and Povey (2002) reported that while ES in England are taking use of various psychological tactics, more training within the field is necessary. Also, Mckenna et al. (2002) pointed out that training in psychological intervention needs to be undertaken consistently in the course of developing into a professional. While ES consistently receive education in related skills, the total time spent in the area is limited compared to that spent in aiding of the physical recovery. According to Larson, Starkey, and Zaichkowsky (1996) 71% of the ES witnessed firsthand the athletes suffering from stress and anxiety during rehabilitation. Since the ES are in the closest proximity to the athletes and patients in their recovery, their adequate handling of the mental difficulties of their subjects will bring desirable results.

Also, it appeared that the seasoned group of ES more often consulted a psychological expert upon hearing the pleas of the patients and athletes than the group relatively unexperienced.

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This seems due to the fact that the seasoned group are aware of the limitations of the applying or psychological skills, and that they more appropriately take note of the seriousness of the demands of their patients. In the research by Biviano (2010), they seemed more aware of skills to aid them in the process, and the more confident they were in treating emotional demands, the more often they led their subjects to consult a mental health expert. Despite the taking note of the seriousness of the emotional plea and the consulting of a related professional being a convenient way of aiding rehabilitation, none of the ES who had less than 5 years of experience had consulted an expert for the treating of their patients. Seeking aid from a professional is as important as applying the skills in person. Thus, needing emphasis is the education on the consultation procedure and the discourse on the consultation with the patient beforehand, in the process of the ES maturing into a professional.

4. Conclusion

Through the present research it was found that the ES not only aid in the physical recovery of patients but also the psychological. It can be assumed that the ES, who must address various mental difficulties which athletes go through, including not only the mental hardships related to injury, but those unrelated, will have to be more rigorously educated regarding the psychological skills. In particular, it is deemed that education is necessary so that the ES could aid their patients, leading them to consult psychological and mental experts and helping them receive the right treatment at the right time.

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