

**The Effectiveness of a proposed heuristic program in raising the level of
motivation of injured players to quickly return to competition
A field study of soccer players for the Algerian Professional League
teams – First teams**

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Abstract

The study aims to investigate the effectiveness of a heuristic program in stimulating the motivation of injured players to quickly return to compete in the Algerian Professional League teams. We used, for this purpose, the experimental method on a sample of 10 injured players from the Algerian Professional League teams as an experimental sample. We implemented the pre and post measurement and it was chosen following a deliberate mode. In collect data, the motivation scale for the injured players was used, and a 12-week counseling program was implemented. After collecting the results and treating them statistically, the program's efficacy was achieved, and its intended high quality requirements were met. Based on the results, the study recommended the implementation of the motivation scale periodically to injured player's well as getting help from the introduction of the proposed psychological counseling program to stimulate motivation and similar heuristic programs and plans within the programs of activity in sports teams, while ensuring the continuity of the performance of these programs and not for a given period of time.

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I. Introduction

Psychological counseling is one of the branches of general psychology; its inception could be dated at the beginning of the 20th century and it came as an answer to the need of the American society for professional guidance in an organized scientific way and this according to individuals' preparations, inclinations, and abilities, putting the right man in the right place, it gradually developed and became a course in the psychology curriculum in universities (Bacon S.F, 2005) . The focus and attention on this new science was on two important sides, which are respectively mental health and compatibility, in addition to the focus on psychological development, as this was pinpointed in the studies of growth psychology, particularly in the " Jean Piaget and Ark Son " study in the demands of psychological development. This trend sees that the function of mentoring is to facilitate the growth of the individual during his different stages, in a way that helps him to reach and achieve the requirements for growth at each stage (Ramzi S. & Besharat, 2010). In light of this, several fields and domains of psychological counseling have emerged, including sports psychological counseling that investigates the way to help athletes understand and analyze their aptitudes, abilities and tendencies and also solve the problems they face during sports competition, as well as help and guide them in making appropriate decisions in order to achieve success and adapt to the conditions of competition. (Ramzi S. & Besharat, 2010) Muhammad Larbi Chamoun defines the process of sports psychological counseling as “ a continuous awareness-raising process and planned services that aims to improve the level of sports performance and overcoming the problems that result from psychological pressures ” (Hydon,1986).And also psychological rehabilitation after injury with the aim of reaching sporting achievements, self-realization, compatibility and mental health ”(Ibrahim Abd Rabou Khalifa, 2004). Sports psychological counseling delves into football with its competitive nature, which requires players to have physical, skill and tactical abilities in addition to the presence of psychological skills. The different theories of sports psychological counseling insist on the need for a psychological specialist to be at the helm in the case of the psychological counseling process. Two different studies respectively by Djamal Eddine Boumendjel (2007) and Zoheir Oulmane (2013) confirm that the psychological counseling factor by the psychologist is very important to raise motivation, as this latter is one of the most important topics of psychology, and among the most significant be it on the theoretical or practical level. Mohamed Allaoui described the motivation of sports

achievement as the athlete's willingness to face the requirements of sports competition and try to excel and raise by showing a great deal of activity, effectiveness and perseverance as an expression of desire, struggle and fight for supremacy and excellence in sports competition situations (Mohamed Hassan Allaoui, 2012). Nevertheless, it is worth noting that the occurrence of sports injuries is constantly rising in different and numerous sports and competitions and that is a result of the of competition intensity and the ever increasing level of psychological pressures associated with performance despite the fact that science has seen a great deal of development in sports training and related sciences (Osama Riyadi 2002). In this regard, we ask ourselves a central and important question: Does sports psychology have a role in psychological care in the event of injury? Also that the player needs treatment and medical rehabilitation, but also psychological rehabilitation so he overcomes the fear of the dangers of sports injury, and therefore he can return to his previous true level before the injury. Mohamed Allaoui remarked that among the questions being raised currently among specialists in the field of sports, including administrators, coaches and players, is the following: What is the extent of practical benefit in the field of sports psychology related to the improvement of the ability and level of athletes? Mohamed Allaoui attributes this question to the interest of some scientific references and research in the field of sports psychology in more theoretical aspects and at the same time an interest in the applied aspects of this science. In light of this, psychological preparation for athletes, and in particular psychological skills training, could be considered among the most important areas of psychology. Sports injury is considered as one of the important obstacles to attain athletic achievement and reach the highest levels as it is one of the important factors forcing a player to stay away from sports competition. There have been a number of definitions of the term injury, including its concept, causes, and consequences for the individual's health and achievement, whether in terms of physical, skill or psychological sides. Many coaches are interested in the athlete's physical, physiological and training aspects to bring him to the highest possible athletic level but neglect the psychological aspect in training, although that plays a major role in the movement aspect and in the player's emotions and responses during his participation in the sporting activity to contribute to victory, break records, especially if the level of the different players is close to each other. We have concluded that motivation is one of the psychological aspects most related to sports performance in terms of its effect on sports injury and the

effect of motivation on recovery from sports injury. The topic of motivation has been widely investigated by researchers. One of the most important previous studies related to the subject of our study is that of Bourenane Cherif Mustapha under the title of “The anxiety of sports competition and its relation to the motivation of athletic achievement among team sports players in Algeria: a field study of the first national division teams “. The study identified the dimensions of competition anxiety and achievement motivation characterizing the top level football player and identified also the relationship between these two variables (competition anxiety and achievement motivation).The study also tried to know the extent of the difference between the players in achievement motivation according to the levels of competition anxiety and, on the other hand, identify the differences in competition anxiety according to the experience variable and the team results. The researcher used the descriptive approach and the research sample consisted of 45 players from a community consisting of 400 players representing all the teams in the first national division and whose age ranged from 18 years and more. Among the most important findings of the study is the distinction of players with different dimensions of achievement motivation which is the motive to achieve success and the motive to avoid failure also there exist a positive correlation between competition anxiety and achievement motivation and its dimensions.

We conducted this research with the aim to develop a psychological program that stimulates the motivation of the injured player to push him to return from injury in the shortest possible span of time to resume sports activity again. In the other hand, when player and coach grasp the psychological aspects that may help the player overcome his injury's period. Post-recovery rehabilitation from injury is nothing but psychological rehabilitation first, before it is physical. One may even say that psychological rehabilitation starts as soon as the injury occurs so that it does not affect the player recovery later. The importance of this research is also evident because of the scarcity of studies " to the researcher's best knowledge " that have dealt with the effect of the psychological aspects on the speed of recovery from sports injury. Players in different sports, especially in football, suffer injuries during training and also during competitions and games, and when this injury occurs, their psychological state changes during the occurrence of the injury and during the treatment period for fear that the injury may affect the level of their performance of sports skills and they feel anxious that the affected part may not return to its normal state in the quickest time possible. All these factors may affect the

injured player and they accompany many psychological variables that impede and delay the player's return from injury. Among the studies that have dealt with injuries, the study of Mohamed Ali Abdelaziz Mohamed Al-Burai under the title "Effectiveness of a psychological program for rehabilitation from knee joint injuries for football players ". The study aims to identify the nature of the relationship between mental perception and injury, the effectiveness of the proposed psychological program for rehabilitation from knee joint injury for a soccer player and the nature of the relationship between relaxation and restoration of healing and injury. The researcher used the experimental method opting for an intentional sample from elite players for the football team for the age over 20 years at the Egyptian Essayd Club. The psychological program is implemented in the form of mental training skills in addition to the treatment rehabilitation program for each player separately and according to the degree and nature of the injury when available. Then a pre and post-measurement of the ability to visualize and relax, as well as pre and post measurement of the injury is implemented. The study came down to a number of results among which the presence of statistical significance differences between the pre and post measurements in favor of the post measurement on visualization, relaxation and sports injury is the most important.

Based on the theoretical background presented and the previous studies on the subject, we present the central question of our research as follows: How effective is a proposed counseling program in raising the level of motivation of injured players to quickly return to competition in the elite teams of Algerian football?

II. Method and Materials

• Participants

A sample is defined as "a group of individuals taken from the original community so that they faithfully represent it" (Ahmed Atallah Boudaoud, 2009). Our sample is represented by the players of the Algerian Professional League specifically the players of the Algerian elite football teams for the season 2019-2020. The teams part of the sample are: Entente Sportive de Setif (ESS) - 26 players -, Mouloudia Club d'Alger (MCA) - 25 players -, Union Sportive Medina d'Alger (USMA) - 26 players and Chabab Riadhi de Belouizdad (CRB) - 26 players. We selected a sample that was chosen by the intentional method and included 10 injured players to implement the program on them.

- **Materials**

- The motivation scale for injured players, designed by the researcher.
- The proposed psychological counseling program to improve the level of motivation, designed by the researcher.

- **Design and Procedure**

Following the research's objectives, we used the experimental method, more precisely an experimental designs known as the design of pre and post measurement on one experimental group. In this method, the experimental group is subjected to a pre-measurement, then it is exposed to the program, whose effectiveness need to be tested, then a post measurement is performed and the degrees of the pre and post measurements are compared to find the differences in significance.

Steps to build the motivation scale for injured in athletic competition

Determining the scale axes

To determine the dimensions of the motivation scale among athletes injured in competition, we conducted a reference survey after reviewing a number of measuring tools used to scale motivation. We aimed through the use of reference survey to determine the dimensions through which appropriate dimensions will be chosen and selected to be appropriate to the nature of the research sample. After the researcher deleted and modified the phrases in the light of the experts' suggestions, the results of the expert opinion poll reached an experimental picture of the scale as shown below.

Table1. Final image of the scale phrases after presentation to the experts

Axes	Before modification	After modification
First: desire to excel	10 expressions	07 expressions
Second: level of ambition	10 expressions	08 expressions
Third: perseverance	10 expressions	06 expressions
Fourth: independence	10 expressions	08 expressions
Fifth: self confidence	10 expressions	07 expressions
Sixth: commitment	10 expressions	07 expressions
Seventh: focus on performing	10 expressions	08 expressions
Eighth: goal achievement	10 expressions	06 expressions
Motivation measure for injured players in competitive sports	80 expressions	56 expressions

We can conclude from Table 01 results that the initial image of the scale contained 13 expressions, and after presenting the expressions to the experts to verify the logical validity of the scale, the experimental image now contains 27 expressions.

Calculating the validity factor of the scale: We used the internal consistency method, by finding the correlation coefficient between the

axes and axes and some of them, between the expressions and the axes to which they belong, and between the expression and the quantitative degree of the scale as in Table 02

Table2. Correlation coefficients between the scale dimensions and axes

Ax	1	2	3	4	5	6	7	8	Total score
01		0.670	0.650	0.699	0.611	0.740	0.720	0.760	0.859
02			0.680	0.650	0.710	0.660	0.630	0.740	0.811
03				0.610	0.730	0.710	0.780	0.720	0.813
04					0.611	0.620	0.600	0.721	0.780
05						0.650	0.730	0.721	0.800
06							0.643	0.663	0.815
07								0.790	0.800
08									0.820

Table 02 shows that there is a statistically significant correlation relationship at 0.05 level between the degree of each axis and the quantitative score, which indicates the validity of the internal consistency of the scale.

Calculating the reliability factor of the scale: We used Spearman-Brown's half-segmentation method and Getman's equation, in addition to the "Cronbach-Alpha" stability factor, to be able to calculate the reliability factor of the scale. It gives an internal consistency factor for the scale structure, in addition to identifying expressions that lead to a decrease or increase in the quantitative stability factor of the measurement tool when it is deleted. This is summarized below:

Table3. Stability of the scale by the half-segmentation method and Cronbach- Alpha

Axes	Half segmentation		Cronbach-Alpha
	Getman	Spearman-Brown	
Total score of the scale	0.760	0.730	0.801

One can conclude from the table n° 03 that the coefficient of stability by the Cronbach-Alpha half-segmentation method indicates that the scale under investigation has a high reliability coefficient.

Scale correction method: Upon completion of the previous steps, the scale was designed along the lines of the Rensis Likert method, in which a quadruple scale was placed in front of each phrase (often, sometimes, rarely and ever) and these responses were given in the grading as follows:

Table4. Scale of the assessment for the response of motivation scale statements among the injured players.

Balance of appreciation	Often	Sometimes	Rarely	Never
Positive	4	3	2	1
Negative	1	2	3	4

We preferred this evaluative scale, as it gives scope for determining the trend with a greater degree of accuracy as well as preventing neutrality so each dimension is corrected separately by adding the scores for the expressions that make up each dimension. Therefore, the closer the subject's score is to 51 in each of the first, second, third and fourth dimensions, and to 55 in the fifth, sixth, seventh, and eighth dimension, the more this indicates more motivation associated with this dimension, and the grades of the eight dimensions can be combined to identify the total sum of the scale, so the total scale scores 228 degrees.

The proposed psychological counseling program: We prepared a proposed psychological counseling program to improve the level of motivation in injured players. After that, we conducted a comprehensive reference survey of references, scientific researches and the reference studies closely related to the research. Following all this, we developed the program on the following principles and steps:

We put the counseling sessions for the motivation variable and divided into 24 counseling sessions at the rate of two sessions a week. Each session lasted 40 minutes, and took place one hour before the start of the team's training; finally, the session time is divided into 30 minutes counseling and 10 minutes' relaxation.

Parts of the counseling session: The counseling session consisted of two parts which are:

First part (counseling): We discussed in this section the dimensions of motivation and there are eight (desire to excel, level of ambition, perseverance, independence, self-confidence, commitment, focus on performance and goal setting). Each one of these dimensions includes sub-axes that add to the construction of this dimension, and this is based on the opinions of the experts for this part of the program.

Second part (relaxation): The goal of this part is the injured player return to his normal state and the relaxation of his muscles. We used muscle relaxation, breathing control and visualization, so the injured player is ready to begin physical rehabilitation with the therapist and is fully prepared to participate.

Pre-measurement stage (before implementing the program): We collected personal data about the players (name, date of birth, team name, player description). We measured then the sample's motivation through the motivation scale we prepared and designed, and finally all the scales papers were corrected with the correction keys prepared for that effect.

Program implementation phase: The program was implemented in 12 weeks, at the rate of two sessions a week, which amounted up to 24 sessions, and each session lasted 40 minutes.

Post-measurement stage (last session in the program): We followed, in this measurement, the same previous steps followed in making the pre-measurement stage.

- **Statistical Analysis**

The obtained results have been presented in their quantitative form and this with the intention of the analysis to the treatment using the Excel 2007 program. We calculated, this way, each of: the arithmetic averages and standard deviation, the correlation coefficient for measuring the stability of the research tools and the test "T" Student.

III. Results

Table 5. pinpoint the significance of the differences between the pre-measurement and the post-measurement of the experimental group in the axes of the motivation scale of the injured players in competitions under study. N = 10

Axes	Pre measurement		Post measurement		T value	Effect size	
	Average	Deviation	Average	Deviation		η^2	E S
Desire to excel	20.05	0.33	66.50	0.30	4.30	0.588	108
Ambition level	21.30	5.50	31.00	0.80	4.45	0.683	203
Perseverance	14.00	3.50	22.00	0.52	6.60	0.900	205
Independence	20.11	4.70	29.50	0.31	6.80	0.830	203
Self-assurance	18.00	5.00	27.90	0.00	5.80	0.800	201
Commitment	19.00	4.20	26.00	0.70	6.00	0.798	207
Focus on performance	21.70	3.50	30.90	0.76	7.60	0.860	306
Goal determination	15.30	3.50	23.50	0.78	6.80	0.834	306
Total score of the scale	150.50	32.80	210.00	1.03	6.90	0.840	208

Table n°05 shows us that the calculated values of (T) ranged from 4.30 to 6.90. To be able to determine the applied significance of the independent variable on the dependent variable, the effect size was calculated using η^2 (Eta squared) which expresses the magnitude of the effect of the independent variable on the dependent variable. The values of η^2 (Eta squared) ranged from 0.588 to 0.900, and this indicates that the size effect

is huge. The ES values ranged from 108 to 306, and this indicates also the size effect to be huge.

IV. Discussion

The results of Table n° 05 have shown that the effectiveness of the psychological counseling program to improve the level of motivation of injured players. The effectiveness of the counseling program was made evident by the presence of significant statistical differences between the pre-measurement and the post-measurement in favor of the post-measurement of the experimental group when it comes to the level of motivation. The pre-measurement average of this variable lies in 150.50 with a standard deviation of 32.80, and therefore the average level of motivation falls in the average stage as shown in Table n° 05 while the average post-measurement of this variable after the program, to which the injured players were subjected lies in 210, with a standard deviation of 1.03. From here, the average level of motivation lies in the upstream stage as also shown in Table 05 and that the value of T is 6.90. Our study's results corroborate the results of the study of Asma Ibrahim Mohamed Matar (2010), Moudjahid Mohamed Moudjahid (2013) and Hachem Abdelmourid Abdelhamid Moussa (2017), in which they concluded that there are differences between the pre and post measurements in favor of the post measurement of the experimental group in the motivation variable. Their studies also concluded that it positively affects the motivation variable in its various dimensions despite the differences in the studies' samples. We believe that these differences between the two measurements (pre and post measurements) indicate the extent of the effectiveness of the psychological counseling program in improving the level of motivation among the injured players in sports competitions and also their possession of a high level of motivation, in the dimensions it put forward (desire to excel, level of ambition, perseverance, independence, self-confidence, commitment, focus on performance and goal setting). The program consisted of a number of counseling sessions the injured player was subjected to, they were group counseling sessions in which we used a different set of techniques and guidance methods such as role playing, emotional ventilation, problem-solving method, positive reinforcement, and other techniques that made the injured players have a desire to excel. The player had also ambition he seeks to attain, a degree of perseverance, an endurance and continuation of work and a high degree of independence. We can also add that the program helped increase the player's self-confidence with the need for commitment,

discipline, and an increased focus and defining the goals he strives for. It is clear from what preceded and also the results that the first hypothesis of the study has been tested true, and it says there is a presence of significant statistical differences between the pre-measurement and the post-measurement of the experimental group in favor of the post-measurement in the motivation variable.

V. Conclusion

Following what we have exposed and in which we tried to identify the effectiveness of a proposed counseling program in raising the level of motivation of injured football players to rapidly return to competition, and in light of the objectives and hypotheses of the research and the method used, and also within the limits of the research sample and its characteristics, and through statistical analysis and based on the results that have been reached, we have concluded that there are statistically significant differences between the pre and post measurement in the motivation scale. The improvement rate reached 45.21%, which is due to the implementation of the psychological counseling program. This proves that the program is effective and achieves the requirements it has been put for with high standards and that it is possible to reach a qualitative measure of motivation that includes eight basic axes. In addition, and in light of the results of the current research, it has been concluded that attention must be paid to periodically implementing the motivation measure to injured players and paying attention to implement the suggested counseling program to stimulate motivation on all injured players. Finally, we should seek complementarity in the technical staff, with the presence of a sports psychologist and psychological guidance and counseling programs designed to provide players and coaches with psychological skills, and this is due to their utmost importance.

VI. References

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