



CONSTRUCTION OF DRUG RELATED KNOWLEDGE TEST IN WEIGHT LIFTING

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ABSTRACT

A Study was conducted on Construction of drug related knowledge test in weight lifting. A set of thirty questions covering the knowledge aspects of drugs and

their harmful effects on the usages were constructed. The questionnaires were constructed by going through various related literature on drugs. A lot of information from weight lifting coaches and other experts in the field of health, fitness and sports were collected before the construction of questionnaires. The questionnaire was administered during National and All India Inter-University competitions. The lifters were explained about the aims and objectives of the study. Further, they were assured about the confidentiality of their information. In drug related knowledge questionnaire each correct response would be awarded one mark and each wrong response would be awarded zero mark.

Item analysis of the questionnaire was done in order to make decision about individual test items within the test as well as the worthiness of the test as a whole. For this purpose the difficulty rating and index of discrimination were used. The index of discrimination was done to provide information about the high and low performance of the test who answered each test item correctly. Reliability of the knowledge part of the questionnaire was identified by using kuder-Richardson formula.

Key words: Weight Lifters, Anabolic Steroids, Drug, Nutrition and Doping.

Introduction

Weight lifting as a sport got a place of pride in Athens Olympics in 1896 and since then has been a part of modern games. The first official championship was held in 1898 in Vienna. The competitors in early years of Olympic weight lifting were only Europeans. It was recently been gaining importance globally after many years of being considered as simple means of training and conditioning for other competitive sports. It took its modern form in 1928 when one-hand exercises were abolished and disc barbells used. Results dramatically increased and new records were made. Till 1972 weightlifting was judged on three lifts. At the Munich Olympics (1972) the controversial "Press Lift" was abolished, as referees could not adjudicate the "Press Lift." The International weightlifting Federation (I.W.F.) recognized two lifts (1) The Snatch (2) The Clean and Jerk. Firstly Snatch had been included in 1928 Amsterdam Olympics. The competition was decided on the aggregate of these two lifts. A competitor was allowed three lifts in each category. The competitors compete in categories according to their body weight. Weight lifting for women was introduced for the first time in the Sydney Olympics, 2000. To strive to win, it has become an accepted practice. The philosophy of sports participation has undergone a change. Now an individual participates in order to win and even his countrymen encourage the sportsman as it has become a prestigious aspect to prove their superiority over other



nations and societies. This is contrary to the earlier philosophy of Pierre de Coubertin who, during the opening ceremony of Olympic games in Berlin in 1936 said, "The important thing in the Olympic games is not winning but taking part for the essential thing is not conquering but fighting well."

Methodology

The purpose of the study was, Construction of drug related knowledge test in weight lifting. A set of thirty questions covering the knowledge aspects of drugs and their harmful effects on the usages were constructed. The questionnaires were constructed by going through various related literature on drugs. A lot of information from weight lifting coaches and other experts in the field of health, fitness and sports were collected before the construction of questionnaires. This knowledge was incorporated in the questionnaires, so an appropriate questionnaires were made.

The questionnaires were modified with the help of expert's opinion. These questionnaires were administered to two hundred All India Inter-University and senior national level players of weight lifting. The complete analysis of the questionnaires, including difficulty rating and index of discrimination was done.

Administration of the questionnaire

The questionnaire was administered during National and All India Inter-University competitions. The lifters were explained about the aims and objectives of the study. Further, they were assured about the confidentiality of their information.

The subjects were given the questionnaire and were requested to fill them independently, without taking assistance from any one. The filled questionnaires were collected and

analyzed using appropriate statistical procedure.

Scoring Procedure

In drug related knowledge questionnaire each correct response would be awarded one mark and each wrong response would be awarded zero mark.

TABLE-1
ANSWER KEY (DRUG RELATED KNOWLEDGE)

| Responses | Item Number |
|-----------|---|
| True | 1, 2, 3, 4, 5, 6, 13, 16, 17, 19, 23, 24, 25, 26, 28, 29, 30. |
| False | 7, 8, 9, 10, 11, 12, 14, 15, 18, 20, 21, 22, 27. |

Item Analysis of the Questionnaire

Item analysis of the questionnaire was done in order to make decision about individual test items within the test as well as the worthiness of the test as a whole. For this purpose the difficulty rating and index of discrimination were used.

Difficulty Rating

It was determined by dividing the number of players who answered an item correctly by the total number of players who appeared for the test. The formula used was :

$$DR = P/N$$

Where:

DR= Difficulty Rating

P= Number of students who answered an item correctly.

N= Total Number of students who appeared for the test.

Index of Discrimination

The index of discrimination was done to provide information about the high and low performance of the test who answered each test item correctly. For index of discrimination the scores of the top and bottom 27 percent of



the players who appeared in the test were used. Index of discrimination was calculated to identify that whether or not a particular test item is able to discriminate between high and low performers of the test. The formula used was

$$ID = \frac{Cu - Cl}{Nu}$$

Where:

ID= Index of Discrimination.

Cu= Number of Correct Responses in the top 27%.

Cl= Number of Correct Responses in the Bottom 27%.

Nu= Total Number of students of any one group.

TABLE 3
DIFFICULTY RATING AND INDEX OF DISCRIMINATION OF
ALL THE ITEMS RELATED TO DRUG RELATED
KNOWLEDGE (N=200)

| ITEM NUMBER | DR =P/N | INDEX OF DISCRIMINATION | REMARK (Accepted /Rejected) |
|-------------|---------|-------------------------|-----------------------------|
| 1 | 0.845 | 0.518 | Accepted |
| 2 | 0.83 | 0.407 | Accepted |
| 3 | 0.71 | 0.481 | Accepted |
| 4 | 0.93* | 0.185 | Rejected |
| 5 | 0.805 | 0.296 | Accepted |
| 6 | 0.71 | 0.037 | Accepted |
| 7 | 0.47 | 0.444 | Accepted |
| 8 | 0.55 | 0.259 | Accepted |
| 9 | 0.47 | 0.222 | Accepted |
| 10 | 0.465 | 0.296 | Accepted |
| 11 | 0.43 | 0.370 | Accepted |
| 12 | 0.435 | 0.518 | Accepted |
| 13 | 0.42 | 0.481 | Accepted |
| 14 | 0.44 | 0.444 | Accepted |
| 15 | 0.65 | 0.592 | Accepted |
| 16 | 0.85 | 0.333 | Accepted |
| 17 | 0.775 | 0.370 | Accepted |
| 18 | 0.715 | 0.407 | Accepted |
| 19 | 0.86 | 0.370 | Accepted |
| 20 | 0.55 | 0.444 | Accepted |
| 21 | 0.675 | 0.370 | Accepted |
| 22 | 0.38 | 0.629 | Accepted |
| 23 | 0.855 | 0.222 | Accepted |
| 24 | 0.625 | 0.703 | Accepted |
| 25 | 0.52 | 0.296 | Accepted |
| 26 | 0.87 | 0.481 | Accepted |
| 27 | 0.51 | 0.407 | Accepted |
| 28 | 0.82 | 0.407 | Accepted |
| 29 | 0.815 | 0.481 | Accepted |
| 30 | 0.88 | 0.259 | Accepted |

* Rejected (If DR < 0.10 or >0.90)

** Rejected (If ID is Negative)

Table -3 indicates the difficulty ratings of each question. Those questions whose difficulty rating was found less than 0.10 and more than 0.90 were eliminated. On the basis of difficulty rating one test item was eliminated from the test. The item discarded on the basis of difficulty rating was: - 4. Table -3 also indicates the index of discrimination of each knowledge question. Those questions whose index of discrimination was found to be negative were eliminated.

Reliability of Questionnaire

Reliability of the knowledge part of the questionnaire was identified by using kuder-Richardson formula which is as follows.

$$R_{tt} = \frac{n(Sx)^2 - M(n-M)}{(Sx)^2(n-1)}$$

Where :

R_{tt}= Reliability of the test

n= number of items on test

M= Mean of test scores.

Sx= Standard deviation of test.

TABLE 4
MEAN, STANDARD DEVIATION AND RELIABILITY OF THE
KNOWLEDGE PART OF QUESTIONNAIRE

| Mean | Standard Deviation | Reliability |
|-------|--------------------|-------------|
| 18.95 | 3.68 | 0.53 |

Table -4 indicates Mean, Standard Deviation and Reliability of the knowledge part of Questionnaire, Mean = 18.95, Standard Deviation = 3.68 and Reliability =0.53, The mean is the average of a set of numbers, A standard deviation is a measure of how dispersed the data is in relation to the mean. Reliability refers to consistency in measurement.

Conclusion

It had been concluded that on the basis of difficulty rating one test item was eliminated from the test. The item discarded on the basis



of difficulty rating was: - 4. Those questions whose difficulty rating was found less than 0.10 and more than 0.90 were eliminated. In index of discrimination of each knowledge question. Those questions whose index of discrimination was found to be negative were eliminated. There is no question found whose index of discrimination was negative. The revised test contains 29 objective type questions in drug related knowledge test in weight lifting for National and University level Weight Lifters.

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