

The effect of using smart sportswear technology (KAATSU) On the athletes performance

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Abstract:

The aim of the research is to use clothing technology to design an innovative sports T-shirt using (KAATSU) technology and to identify its functional efficiency and its impact on some performance variables (physical - physical) under research. Also, the experimental approach using the experimental design of two groups, one of them is an experimental group to which the innovative sports T-shirt (KAATSU) technology is applied during training, and a control group uses the traditional method of training, and it represents the research community in the boxing players in Mahalla al-Kubra in Gharbia Governorate who are registered with the Egyptian Boxing Federation for the sports season 2020/2021AD. The number of (62) athletes boxer in clubs (Ghazl Al-Mahalla, July 23, Al-Said), and the research sample was randomly selected, numbering (46) athletes, and the researchers chose the basic research sample and their number was (30) boxers. Each of them (15) boxers, one experimental and the other control, and the most important study tools were the measure of the emotional side to evaluate the method used for (KAATS) training. U) (researchers design), and the most important results were the effect of using the innovative sports T-shirt using (KAATSU) technology on the emotional side of the experimental research sample, superior to the control group, the effect of using the innovative sports T-shirt using (KAATSU) technology on improving the level of performance (physical and physical). The experimental research sample is superior to the control group.

keywords:

KAATSU sports shirt, performance, athletes

Introduction:

Man has been in his constant struggle with life, trying to impose his control over it in all its aspects, using all the scientific capabilities that he has accumulated over the ages, which made the scientific development that occurred during the current era the fastest and most prestigious. Scientific research also plays an important role in the development of smart clothing technology, which is currently experiencing rapid growth and is of particular importance all

over the world. Clothing that monitors, measures and alerts the wearer's vital signs such as heart rate, temperature and blood pressure is no longer science fiction, but has become a reality, as textile experts and fashion designers seek to design and develop smart clothes that compete with traditional. (Gil, A. L., Neto, G. R., Sousa 2017)

In particular, clothing technology plays an important role in the sports field, which can be seen in many images that help players to develop the level, for example, "Ralph Lauren's smart sports T-shirt. <https://sites.google.com>))

From this point of view and within the limits of the researchers' knowledge of the modern technological means in the sports field and the goal that the trainers seek to reach the higher levels, the researchers noticed that recent studies in the sports field have tended to use some training methods that put pressure on the muscles during training through the so-called exercises Restrict blood flow to the muscles, which plays an important role in increasing and raising the level of physical and physiological fitness of the players.

The research problem can be concluded in the following questions:

Research problem :

- What is the possibility of employing the proposed technology in the production of the sports T-shirt to improve the performance of the players?

Research Importance :

The study deals with the use of technology in the production of clothing.

Paying attention to sports and developing the level of performance of the players.

Search objective:

The aim of the current research is to use clothing technology to design an innovative sports T-shirt with (KAATSU) technology and to identify its impact on the emotional side and performance level of athletes.

Research hypotheses:

- There are statistically significant differences between the experimental group and the control group in evaluating the emotional side of the performance effectiveness of the innovative sports T-shirt and the traditional method of KAATSU tapes in favor of the experimental group under study.

- There are statistically significant differences between the pre- and post-measurements and the two post-measurements of the experimental group and the control group in some physical and physiological variables under study and in favor of the experimental group under study.

Search Limits:

Time and Place Limits:

- The sports T-shirt was implemented at the "Sky Top" factory for the manufacture of sports clothing in Mahalla Al-Kubra from 22-12-2020 to 23-1-2021.
- The practical side was carried out at the July 23 Sports Club in El-Mahalla El-Kubra.
- The researchers compiled and tabulated the data in preparation for its statistical processing, presentation, discussion and conclusion of conclusions.

Human Limits:

- Boxing players in July 23 Sports Club as a sample for research.

Physical Limits:

Raw materials used and auxiliary materials in the production attic: -

- T-shirt material (65% cotton: 35% polyester) single jersey.
- KAATSU sports tapes.

Conclusions:-

- The effect of using the innovative sports T-shirt KAATSU technique on the emotional side of the research sample (the experimental group), and with a high relative importance
- The effect of using the innovative sports t-shirt using KAATSU technology on improving functional efficiency through the agreement of the experimental group over the control group in the physical and physiological variables.

Recommendations:-

Awareness of trainers about the importance of using the innovative sports T-shirt for KAATSU exercises because of its positive impact on the level of sports performance, and conducting scientific research in sportswear technology

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