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The effect of using special intense exercise accompanied by intermittent electrical stimulation to get rid of lower neck pain among professors of the College of Science - University of Baghdad for ages (40-60) years

Karam Salam Ismaeil [1], Farah Essam Abdul Ameer [2], Ghadah Muayad Shihab [3], Mohammed Jawad Kadhim [4]

[1,2] University of Baghdad, College of Physical Education and Sports Sciences

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Abstract

Lower neck pain is one of the problems facing all ages, especially the elderly, as it revolves around the causes of this pain from many diverse factors. The aim of the research is to use special intense exercise accompanied by intermittent electrical stimulation to get rid of lower neck pain among professors of the College of Science - University of Baghdad for ages. (40-60) years and to identify the extent of the effect. The research assumed the presence of statistically significant differences. The research sample represented professors at the University of Baghdad - College of Science who suffer from continuous pain for the period between (10/15/2023) and (1/15/) 2024) and their number is (5), The researchers used the experimental method, a single experimental group design with pre- and post-tests to suit the nature of the research problem. The SPSS program was also used to process the data statistically. According to the results collected, it was concluded that the special intense exercise accompanied by intermittent electrical stimulation contributed to getting rid of pain through... Reducing the degree of pain within a short period. The researchers recommended using these special exercises and intermittent stimulation as guidance to relieve pain in other similar cases.
Keywords: Special intense exercise, intermittent electrical stimulation, the pain, Below the neck.

1 Karam Salam Ismaeil, Assistant Lecturer (Master) Physical Education and sports sciences, University of Baghdad, College of Physical Education and sports sciences, (karam.s.638@cope.uobaghdad.edu.iq) (+9647735678638).

2 Farah Essam Abdul Ameer, Lecturer (PH.D) Physical Education and sports sciences, University of Baghdad, College of Physical Education and sports sciences, (farah.i@cope.uobaghdad.edu.iq) (+9647727394670).

3 Ghadah Muayad Shihab, University of Baghdad, College of Physical Education and sports sciences, (dr.ghada@cope.uobaghdad.edu.iq)

4 Mohammed Jawad Kadhim, University of Baghdad, College of Physical Education and sports sciences, (dr.muhamed.juad@cope.uobaghdad.edu.iq) , https://orcid.org/0000-0003-2928-5313

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introduction

The spine consists of (7) cervical vertebrae, followed by (12) thoracic vertebrae that connect with the ribs, then (5) lumbar vertebrae that form the lower back, followed by (5) sacral vertebrae, which are fused together, then (4) coccygeal vertebrae, which are also fused and are called the coccyx (canis, 2009, p. 49), and that pain below the neck is one of the problems facing all ages, especially the elderly, as it revolves around the causes of this pain, many Various factors, including sitting for long hours on mobile phones and computers, lack of exercise, poor nutrition, sleeping using an uncomfortable pillow, and neglecting minor pains that later become a problem that the individual suffers from. (Kadhim et al., 2021) The goal of the research is to use intense special exercise accompanied by intermittent electrical stimulation to get rid of of pain below the neck among professors of the College of Science - University of Baghdad for ages (40-60) years and to identify the extent of the effect. The research assumed the presence of statistically significant differences, and some previous studies dealt with subject variables. The research study, including the study (Mohamed, 2019), whose most important objectives is to develop a therapeutic rehabilitation program that includes a combination of manual therapy techniques (therapeutic massage - manual therapy with high-speed, low-range thrust - manual movement with oscillating thrust) with muscle stretching exercises to rehabilitate women with pain. Simultaneous and chronic pain in the neck and lower back resulting from a swollen disc, and studying its effect on pain, range of motion, and muscle strength in the neck and lower back, and comparing the proposed method. To qualify with the traditional methods used in these cases. Then, we followed up on the effectiveness of this method after the end of the program, and the most important findings were that we found statistically significant differences in pain, range of motion in all directions in the neck and lumbar region, and muscle strength between the control and experimental groups and in Favor of the experimental group in all stages of measurements. There was a rapid and statistically significant decrease in the degree of pain in the neck and lower part. The back of the experimental group in the inter-measurement compared to the pre-test represented twice the percentage of decrease in pain in the control group, as the percentage was 53.4% and 45.4%, respectively, for the experimental group. And 28.4 and 22.5%, respectively, for the control group, and the effectiveness of the positive effects of the proposed program continued after the end of the program, as the values of all variables continued to improve in the follow-up period for the experimental group, while the values decreased in the control group (traditional treatment group), and the study (Ahmed, 2009), which was Its most important objectives are to know the effect of the proposed program of electrical stimulation with therapeutic exercises on the decline and disappearance of the severity of sciatica pain resulting from a herniated lumbar disc, restoring the flexibility of the lumbar region, improving its range of motion, and restoring strength. Muscle muscles of the lumbar region and found positive effects on the degree of pain, flexibility, range of motion and muscle strength of the lumbar region. The importance of the research lies in preparing a set of intensive exercises to help alleviate the pain that affects teachers at the University of Baghdad - College of Science.

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Method and tools

The research sample represented professors at the University of Baghdad - College of Science who suffer from constant pain for the period between (10/15/2023) and (1/15/2024) and their number is (5), and the researchers used a test to measure the intensity of pain (Hamza and Ali, 2022). (page 158)

The researchers conducted the pre-test on the sample at different times of time, and after two weeks had passed, they conducted the post-test. During the period between the tests, intense special exercises were used accompanied by intermittent electrical stimulation to get rid of pain below the digit over a period of (3) units per week (10). D) for intermittent electrical stimulation. The unit consisted of (5) exercises, and the time of the main section ranged between (20-30) minutes.

The researchers used the statistical bag) SPSS (To process the data statistically:

-1Arithmetic mean.

-2Standard deviation.

-3a test) t (for non-independent samples.

Results

Table 1 It shows the arithmetic means and standard deviations of the test measuring pain intensity in the results of the pre- and post-tests

Variables	Unit of measurement	Pretest		Posttest	
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation
Measure the intensity of pain	degree	6.400	0.547	1.200	0.447

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Table 2 It shows the difference of the arithmetic means, its standard deviation, the calculated (t) value, the level of error, and the significance of the differences for the test to measure pain intensity.

Variables	Unit of measurement	Arithmetic teams	Standard deviation	Calculated t value	Error level sig	Connotation
Measure the intensity of pain	degree	5.200	0.836	13.898	0.000	Moral

*Degree of freedom.(4=1-5)

*Significant at the error level (0.05) if the error level is smaller or equal to.(0.05)

Discussion

By looking at tables (1, 2), it is clear that there are significant differences, and it becomes clear that the arithmetic mean is lower in the tests (post-test than pre-test) to measure the severity of pain in the lower neck. The researchers attribute the reason for this to intense special exercise and its contribution to alleviating pain in the lower neck, in addition to The contribution of intermittent electrical stimulation, as integrated physical rehabilitation leads to positive effects in strengthening the affected muscles and contributing to stimulating blood circulation, relieving pain and improving muscle tone (Bakri and Al-Ghamri, 2011, p. 50), and that the use of intermittent electrical stimulation devices has increased the speed of getting rid of much of the intensity of pain, in addition to the use of methods that help in rehabilitating the affected muscles leads to the activation of the circulatory system and the spread of blood in the affected muscles, which leads to the building of the affected muscle fibres. To harm and prevent cases of muscular dystrophy (Ismail and Jawad, 2023, p. 560), as following a systematic biopsychosocial approach to dealing with sports injuries falls on the responsibility of both the sports physician Therapists, strength and conditioning coaches, sports psychologists, nutrition coaches, and the athlete himself (Himmat, Sidak & ,Mandeep, 2017, p. 530), and that the seriousness in working on the special, codified exercises by the research subjects contributed to the decrease in the level of pain, as both (Awaid and Hussein, 2023, p. 712) believe that the application and use of the codified therapeutic exercise contributes particularly effectively to reducing the intensity of pain. The optimal use of new, innovative, complementary methods can help the affected individual improve his health condition and continue the requirements of his daily life, so we see many of them flocking to private gyms to develop Their physical fitness (Khalaf and Abdul-Kazim, 2022, p. 133), as well as the contribution of exercise to prevent these pains from returning again, and (Abdul-Amir and Ibrahim, 2023, p. 534) believe that range-of-

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motion exercises without components and with resistance contribute to the prevention of spinal injuries. The provision of medical services within universities is an urgent necessity to preserve all categories of workers in them, and Mahdi, Hussein, and Zannad, 2021, page 123) on the medical service, its instructions, and the treatment methods provided on campus, as applying the appropriate physical exercise for each type of sports injury and contributing to treatment, which falls on the therapists 'responsibility, as they must understand the basic principles. For sports training in terms of volume, rest and intensity and apply them effectively (Brody, 2012, p. 220), and that improving flexibility contributes greatly to reducing the intensity of pain (Al-Khazraji, Al-Ani, and Abbas, 2017, page 416), and this was confirmed by both (Mahmoud and Ismail, 2023, page 1067). Rehabilitation exercises contribute to making the state of fluidity in movement. Joints.

Conclusions

According to the results collected, it was concluded that the special intense exercise accompanied by intermittent electrical stimulation contributed to getting rid of pain by reducing the degree of pain within a short period. The researchers recommended using these special exercises and intermittent stimulation as guidance to relieve pain in other similar cases.

Appendices

Appendix 1

A model of rehabilitation units

Week: First

Rehabilitation unit: third

Time for the main part of the unit: 24 minutes (10 minutes intermittent electrical stimulation and 14 minutes special intense exercises)

Exercises	Repetition	Time of one repetition	Rest between repetitions	Groups	Comfort Between groups	Total working time	Total rest time	Total time for one exercise	Rest between exercises
Neck pulling exercise to the right	5	10sec	10sec	1	-	50sec	40 sec	1:30 p.m	45sec

Journal of Physical Education

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Exercise to pull the neck to the left	5	10sec	10sec	1	-	50sec	40 sec	1:30 p.m	45sec
Exercise to move the neck forward	10	5sec	-	2	30sec	1:40 p.m	30 sec	2:10 p.m	45sec
Neck rotation exercise right and left	10	5sec	-	2	30sec	1:40 p.m	30 sec	2:10 p.m	45sec
Full neck rotation exercise	10	5sec	-	2	30sec	1:40 p.m	30 sec	2:10 p.m	45sec

Journal of Physical Education

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