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THE PHYSICAL BIORHYTHM COURSE AND ITS IMPACT ON THE DEVELOPMENT OF HANDLING AND SUPPRESSION SKILLS IN FOOTBALL FOR THE PLAYERS OF THE THI QAR EDUCATION TEAM

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ABSTRACT

The significance of the research is found in the fact that the learner must mobilize all his abilities in order to reach the skill level required by the teacher and learner. This entails adapting all body systems to work effectively, and the researchers believe that their work in accordance with the vital rhythm can effectively help the learner reach the highest level. And the research problem is that through access to some studies on the subject of the biorhythm physical cycle, researchers have observed that a problem exists in the lack of consideration when teaching various skills in general, especially when teaching the skills of handling and suppression football in particular, and that this problem is, according to researchers, one of the factors that contribute to players' slow growth or low level of learning. The objective of the research was to determine the impact of the physical biorhythm cycle on the development of the level of handling and suppression skills in football players. As a result, the researchers saw the study of the physical biorhythm cycle in the development of handling and suppression skills in football as advancing the level of the game and developing the skills of the players of Thi Qar Education Team. Regarding the research methodology, the researchers employed an experimental approach and devised two equivalent groups that were suitable for addressing the research problem. The research sample was deliberately selected and consisted of the players from the Thi Qar education team for the academic year (2022-2023), totaling 25 players. However, 5 players were excluded from the original sample due to their lack of homogeneity with the study variables. Consequently, the final sample size consisted of 20 players, who were randomly divided into two equal groups based on their vital rhythm. One group served as the

KEYWORDS

Physical Biorhythm, Handling, Suppression, Football, Team.

experimental group, while the other group served as the control group, with each group comprising 10 players. The improvement of handling and suppressing skills in football through training in accordance with the experimental group's physical biorhythm program is one of the study's most significant findings.

Introduction

Since the beginning of time, there have been numerous natural factors (both genetic and acquired) that have affected human life at various stages (Mutz & Gerke, 2021). These factors are present on a regular basis on a daily, weekly, monthly, and annual basis. It is clear from this that some of these factors are connected to the essential internal environment and others through the influences of the surrounding external environment that affect and affect it (Davis, Hettinga & Beedie, 2020). The stability of the repetition of these indicators and their proportions tended scientists, experts, and specialists to take advantage of the physical rhythm courses in organizing their educational or training work, their daily lives, and investing energy (Knudson & Brusseau, 2021). The biorhythm of physiological topics unfamiliar to our trainers, which is one of the old modern topics, where it first appeared since the eighteenth century and did not take the space it deserves in training and education (Al-Musawi & Mohammed, 2021). This is accomplished by planning a schedule of the necessary exercises and altering the intensity of those activities in response to the positive, negative, and neutral (zero) stages that occur between the two stages (Murawska-Ciałowicz et al., 2021). Because it is a fascinating game with many features in defense, attack, team play, and many enjoyable abilities, football is the most played sport in the world and draws the highest number of society members (Marcelino et al., 2020). As a result, every nation in the globe strives to develop this game in order to attain the best results on a global scale (Ihsan et al., 2022). Iraq is one of the nation's pursuing scientific advancement in the field of football, as well as physical education in general (Busse & Wildangel, 2023). As a result, it is important to put forth great effort to reach the highest levels possible in order to ensure the progress and prosperity of the nation (Hussein, Hassan & Mahmood, 2021). One of the well-known games that has drawn rising interest from nations and athletes of all levels is football (Mabon, 2023). As a result of this enthusiasm, researchers have worked to improve the sport by enhancing the physical, tactical, and skill levels of players (Nadjh & Houssame, 2019). The significance of the research lies in the fact that the learner must mobilize all of his abilities to achieve the desired goal, which entails adapting all body systems to work with high efficiency. The researchers believe that their work in accordance with the vital rhythm can effectively help the learner reach the highest level.

The Problem of The Study

The success of the educational process and its attainment at the required level require that all aspects of raising the educational level be studied and that consideration be given to all methods and means involved in achieving the desired level (Adi & Fathoni, 2019). It is known that humans do not work at one pace all the time, but their work is characterized by a vagary between the rise and the decline in their physical, psychological and physiological state (Weight et al., 2021). According to the researchers, each teacher should be aware of this vital rhythm and work with it in order to complete the task at hand in the shortest amount of time possible. They should also take advantage of these highs and lows by increasing effort when the course is in a positive phase and decreasing it when it is in a negative phase.

Through their access to studies on the topic of biorhythm in its physical cycle, researchers have identified a problem that arises from the lack of consideration when teaching various skills in general, particularly when teaching the handling and suppression skills in football in particular. Researchers believe that this problem is one of the causes of players' underdevelopment or low level of learning. Consequently, the researchers made the decision to investigate the role of the physical biorhythm cycle in the acquisition and refinement of handling and suppressing abilities in football, with the aim of enhancing the overall quality of the sport and fostering the growth of players' talents.

The Objectives of The Study

The research aims to find out :

1. The effect of the physical biorhythm cycle on the development of the level of handling and suppression skills in football players Thi Qar education team.

The Hypotheses of The Study

1. There are significant statistical differences between the control and experimental groups in the post-tests in the level of development of the level of handling and suppression skills in football players Thi Qar education team.

The Areas of The Study

Human field: Players of the Thi Qar education team for the intermediate stage for the academic year (2022-2023).

Time Area: For the period from 14/2/2023 to 22/4/2023

Spatial Area: The Specialized Football Center Stadium in Thi Qar (Al- Askari District Stadium).

Methodology

Research Methodology

The researchers employed an experimental methodology and utilized a design consisting of two equivalent groups, which was deemed suitable for addressing the nature of the problem at hand. This experimental study aimed to substantiate specific hypotheses, since experimental research endeavors to validate hypotheses through the use of controlled experiments (Kirk, 2009).

Community and Sample Research

The process of selecting a research sample is intricately linked to the objectives established by the researchers for their study. Consequently, the researcher's goals and the methodologies employed will ultimately shape the characteristics of the sample that is chosen (Hoepfl, 1997). The sample was intentionally chosen to consist of players from the Thi Qar education team for the academic year 2022-2023, totaling 25 individuals. However, 5 players were excluded from the original sample due to their lack of homogeneity with respect to the study variables. Consequently, the final sample size was reduced to 20 players, who were then randomly divided into two equal groups based on their vital rhythm. One group was assigned as the experimental group, while the other served as the control group, with each group consisting of 10 players. The researchers implemented a program that represented the experimental variable based on the biorhythm for the experimental group, while the control group followed the prescribed curriculum in the college. Additionally, the researchers ensured homogeneity

of the research sample by considering variables that could potentially influence the research results, such as height, weight, and age. The law of torsion coefficient was utilized, and the results are presented in Table 1.

Table 1: Shows homogeneity of the members of the research sample.

Variables	Unit of measurement	M	SD	Torsion coefficient
Age	Year	20.45	1.46	0.987
Height	CM	162.05	6.14	0.480
Weight	Kg	61.25	6.16	0.608

Table (1) shows that the value of the torsion coefficient was limited between (+ 3), which indicates the homogeneity of the sample.

Means of data collection:

- ❖ Arab and foreign sources.
- ❖ The Internet - Personal interviews.
- ❖ Assistant Team.
- ❖ Data Registration Form.

Field Research Procedures:

Skill tests:

1. Medium passing test about three circuits drawn on the ground for a distance of (20) m (Doewes et al., 2020).
2. Stop the movement of the ball test (suppression) (Carraça et al., 2019).

Exploratory Study

Conducting an exploratory experiment, which is defined as a smaller-scale version of the main experiment for the purpose of experimenting to work to reveal the challenges and drawbacks of the main experiment's application or for the purpose of training some assistance cadres to work, is the most important recommendation of scientific research scientists for the purpose of obtaining accurate and reliable results (Swedberg, 2020). The exploratory experiment was carried out by the researchers on Wednesday, 22/2/2023 at nine in the morning in the military district stadium on a sample of the players of the Thi Qar football team and their number (5) players from the research community and from outside the sample to apply the tests, and after a period of seven days on Wednesday, 1/3/2023, the test was repeated with the same procedures in terms of time and place, and the purpose of this experiment is to know the negative correlation between the results of the exploratory experiment, as well as to ensure the following:

1. Finding the scientific foundations of the tests.
2. Know the appropriate tools and devices to conduct these tests.
3. Know the appropriate time and place to conduct it.
4. Ensure the adequacy of the assistant staff.
5. Define the assistant staff in how to apply these tests.

6. Know the difficulties and problems facing the researcher tests.

Scientific foundations of the tests:

1. **Honesty of the test:** Honesty is one of the criteria that must be present in every test used to gauge a quality or a mathematical phenomenon, and an honest test is one that accurately gauges the subject of the measurement while not measuring anything in addition to or instead of it (Novianti, Mahardika, & Tuasikal, 2020). To determine the sincerity of the tests, researchers used virtual honesty (honesty arbitrators), which means that the test appears honest in its apparent form because its name relates to the function to be measured, as the tests were presented to a group of experts and specialists who agreed with their validity to measure what they were designed to measure. According to Sürücü and Maslakci (2020), the veracity of this technique is established by testing, wherein it is given to a panel of experts who assess its ability to effectively measure the intended construct.
2. **Test Stability :** To determine the stability coefficient for tests, it is necessary to employ the principle of the static test. This principle ensures that consistent or identical results are obtained when the test is administered multiple times under similar conditions (Zheng, Li, & Ma, 2021). In this study, the stability coefficient was calculated using the test and re-test method, wherein the first test was conducted on Wednesday, February 22, 2023, at 9:00 AM. The second test was repeated on Wednesday, March 1, 2023, also at 9:00 AM. The interval between the two tests was seven days. The participants included both individuals from the research community and those outside the sample, totaling five players. According to Kurtz (2020), the retest method is considered to be a straightforward approach that involves assessing the consistency of measurements over time. This method is characterized by the interval of coherence, which refers to the duration between two tests. It is fortunate that the inaccuracy connected with the measurement becomes more apparent when there is a longer time gap between the two tests, ranging from one day to multiple days. The stability coefficient was determined by calculating the Pearson correlation coefficient between the scores of the first test and the scores of the second test. The researcher found that the correlation coefficient indicated a high level of stability, as evidenced by the calculated t-value exceeding the critical value of 0.878 at a significance level of 0.05, with 3 degrees of freedom. This finding is shown in Table 2.
3. **Objectivity of the test:** The objective test refers to a scenario where there is no disagreement among arbitrators when multiple referees are involved in evaluating the performance of an individual tester. In this study, researchers assessed the objectivity of skill tests by calculating the coefficient of objectivity. This was done by determining the simple correlation coefficient (Pearson) between the results provided by two arbitrators during the initial application of the tests in the exploratory experiment. The obtained correlation coefficients were found to be high, indicating the objectivity of the tests utilized in the research. Table 2 presents these correlation coefficients.

Table 2: Shows the coefficient of stability and objectivity of the tests.

Tests	Validity of the test	Objectivity of the test
Handling	0.91	0.93
Suppression	0.92	0.95

The correlation coefficient is significant at the level of significance (0.05) and in front of the degree of freedom (3) as the tabular value of (t) is (0.878).

Pre-Tests For the Research Sample

The pre-tests for both the experimental and control groups were administered by the researchers prior to the implementation of the biorhythm program. This program was initiated on Tuesday, 7/3/2023 at nine o'clock in the morning, specifically at the Al- Askari district stadium. All twenty participants in the research sample were present during this session. Subsequently, the researchers and their assistant team proceeded to administer tests to both the experimental and control groups.

Applied Biorhythm Program

The researchers initiated the implementation of the strategy on the experimental group based on the physical biorhythm cycle. This involved electronically extracting the biorhythm for each player in the experimental group. The curriculum was implemented for the experimental group, with the objective of enhancing the number of repetitions for each exercise aimed at skill acquisition. This was done by aligning the exercise regimen with the individual player's physical cycle and ensuring that the training sessions were conducted during the positive phase of their rhythm cycle. During the positive phase of the physical biorhythm cycle curve, the researchers enhanced the intensity of the provided exercise by maximizing the number of repetitions to align with the duration of the stimulus, i.e., the exercise duration. In contrast, during periods of low physical biorhythm cycles, researchers opt to decrease the number of repetitions assigned to the lowest possible value that aligns with this stage. Additionally, players in the negative phase are assigned assistant roles, while players in the positive phase and the remaining two players serve as assistants, taking into account the diminished physical capacity during the negative period. In the exploratory experiment, repetitions were computed for each skill as a means to model performance. This involved calculating repetitions both during continuous activity and during periods of pauses or specific tasks. Based on these calculations, the workload was allocated to players with varying levels of physical rhythm, including those with high and low rhythms. The control group adheres to the training curriculum established and provided by the trainer, exhibiting no discernible distinctions from the experimental group. However, the control group does not consider the physical biorhythm when determining the number of repetitions. The curriculum was implemented consistently from Monday, March 13, 2023, through Monday, May 8, 2023, with a weekly allocation of four hours.

Post-tests for the research sample:

The post-tests for the research sample were administered on Sunday, May 14, 2023, in the Al- Askari District Stadium, following the completion of an eight-week period of implementing compound exercises. The researcher was motivated to ensure that the conditions of the pre-tests were replicated.

Statistical Means

The researchers employed statistical techniques to analyze the data and evaluate the research hypotheses using the statistical software package IBM SPSS Statistics 24.

- Percentage.
- Arithmetic mean.
- Standard deviation.

- ❖ Coefficient of variation .
- ❖ Pearson's correlation coefficient.
- ❖ (T) test for correlated samples.
- ❖ (T) test for independent samples.

Results

Presentation, analysis and discussion of results

Presentation and analysis of the results of the handling and suppression skills of the pre- and post-tests of the control group:

Table 3: Shows the values of the arithmetic media, standard deviations, calculated (T) value, and sig value for handling and suppression skills for the control group.

Variables		Unit of measurement	Pre-test		Post-test		T	Sig
			M	SD	M	SD		
Basic Skills Football	Passing	Degree	13.40	2.70	15.30	3.36	1.22	0.32
	Ball Stop Control (Suppression)	Degree	5.12	1.28	6.10	2.42	1.15	0.26

The retrieved values of several fundamental skills were analyzed, and the outcomes for the pre- and post-tests of the control group are presented in Table (3). It is seen that there are no statistically significant differences, since the p-value (sig) exceeds the threshold of 0.05.

Presentation and analysis of the results of the Passing and suppression skills of the pre- and post-tests of the experimental group:

Table 4: Shows the values of the arithmetic media, standard deviations, calculated (T) value and sig value for handling and suppression skills for the experimental group.

Variables		Unit of measurement	Pre-test		Post-test		T	Sig
			M	SD	M	SD		
Basic Skills Football	Passing	Degree	13.20	3.32	21.70	6.58	3.6	0.000
	Ball Stop Control (Suppression)	Degree	5.20	1.91	7.70	1.33	3.52	0.000

The values of some basic skills were extracted, and the results appeared for the pre- and post-tests of the experimental group as shown in Table (4) We see that there are significant differences because the value of Sig is less than (0.05).

Presentation and analysis of the results of the Passing and suppression skills of the post-tests of the control and experimental groups:

Table 5: Shows the values of the arithmetic media, standard deviations, the calculated value of (T) and the value of sign passing and suppression skills for the post-tests of the control and experimental groups.

Variables		Unit of measurement	Control		Experimental		T	Sig
			M	SD	M	SD		
Basic Skills Football	Passing	Degree	15.30	3.36	21.70	6.58	2.62	0.000
	Ball Stop Control (Suppression)	Degree	6.10	2.42	7.70	1.33	1.82	0.001

The extracted values of several fundamental skills were obtained, and the post-test outcomes of both the control and experimental groups are presented in Table 5. There exist notable disparities as evidenced by the observation that the significance value (sig) is less than 0.05.

Discussion of Results

The experimental group that implemented the curriculum based on physical biorhythms demonstrated a significant advantage over the control group in the administered tests. The researchers posit that this outcome is reasonable, as advancements in an athlete's physical fitness level during their positive peak biorhythm can enhance their skill performance. This improvement is directly linked to the trainee's physical condition, which is associated with the positive peak of their physical cycle within their biorhythm. In such instances, functional activities are positively influenced. During this particular phase of an athlete's biorhythm, optimal performance can be attained, as achievement is influenced by both physical and functional factors. The researchers' conclusion aligns with Su's (2020) findings, which emphasize the significant role of the physical cycle in the biorhythm during the training process. Athletes must possess knowledge about the specific characteristics of their cycle in order to adequately prepare themselves for optimal performance in competitive events. The researchers ascribe the improvement in skills (passing and suppression) to the intensified training regimen implemented on the experimental sample. This involved increasing the number of repetitions during a specific stage of the physical biorhythm cycle, which corresponded to the positive level indicated by the physical cycle curves in the vital rhythm of each player. Consequently, this overall approach resulted in the development of both physical and skill levels, ultimately leading to an enhancement in performance. The objective of the researchers was to capitalize on the phase during which the player is in a positive state of the physical biorhythm cycle. This was achieved by increasing the frequency of exercise repetitions, with the intention of enhancing the specific skill set required for the game. The underlying aim was to improve the players' physical and functional abilities. To harness the advantages of biorhythms, researchers have observed that implementing training or practical physical education sessions early in the day can enhance players' activity levels and elevate the intensity of their vital rhythms. This approach can have a positive influence on the mental and physical capabilities of both athletes and students. It is noteworthy that when the vital rhythm reaches its nadir, individuals may experience an atypical state and become susceptible to errors in judgment and difficulties in articulation during critical moments within their mental cycle. It is evident that there is a significant challenge posed by the insufficient demand for acquiring knowledge in novel areas.

Conclusions

1. Develop skills (Passing and suppression) in football using training according to the physical rhythm program of the experimental group.
2. The best of the two groups was experimental because they were adopted in training and repeating skills (Passing and suppression) in football according to the physical biorhythm that developed the skills in a better way.

Recommendations

1. There is a necessity to place emphasis on the incorporation of essential rhythm within the physical cycle to enhance the acquisition and refinement of football skill abilities.
2. Utilizing the concept of biorhythm, the implementation of training and practical lessons during the early hours of the school day, specifically in the morning, is employed with the intention of enhancing the cognitive and physical performance of students and athletes, hence yielding a favorable outcome.
3. Further investigations should be undertaken to explore the application of biorhythm analysis to additional football talents that have not yet been thoroughly examined by scholars, encompassing both genders.
4. The imperative to do analogous investigations utilizing the biorhythm, encompassing its physical, emotional, and mental cycles, in relation to both individual and collective endeavors.

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