Bio-Dynamic Rhythm Track for Daily Physical-Skills "Force Special Speed and Bearing Performance" of Components Structure of "Unso Kata" Movement Pattern as an Indicator for Training Periods' Planning for Karate

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Abstract:
Wholesale kinetic "kata" essence of real karate, and one of the poles of the sport and in the right way and move on to understanding the performance skills of styles that make up the structure of structural Karate, although attention from trainers during the training the players on the "kata" Beauty kinetic be directed to perform skill components with lack of focus on the actual application of those components, as well as the legalization of individual loads directed to development and a high level of skill to achieve player or a player.
Study procedures:
Methodology:
Use descriptive survey method and the nature of the relevance and objectives of the study.
The human sphere:
sample was selected in a deliberate manner total (12) for the player, under 16 years of stage during the sports season 2010 - 2011.
Test the skills and methods of measurement of kinetic sentences:
• test and evaluate the level of some of the physical limitations - foundational skills methods structural building motor skills your wholesale "Aonso kata, Unsu kata.", Through multiple Altokiet "09:00 AM 0.11, 01:00 AM 0.3 0.5 m, 7 pm and 9 pm"
• statistical area: Use-way analysis of variance and one, the test is less difference. "LSD"
Conclusions:
The period of time that the determinants of bio-dynamic rhythm track physical - skills for "speed and performance durability" of wholesale auto players (kata) is highest during the day occurred during that time (11:00 to 13:00 AA), 5 to 7 ϖm.
skill as an indicator for planning training periods for players Wholesale Car (kata)ϖ• can be recommended rationalization period of time and in accordance with the highest average daily bio-rhythms of the determinants of physical – Karate.

Introduction:

The movement pattern "kata" is considered the real karate essence, and one of the poles of this sport and the right and effective way to understand skills performance of the methods constituting the karate structure, though, coaches' attention during Kata training is directed to components' skill performance with lack of focus on components actual practice, as well as individual standardization of directed loads to develop and increase player's skill achievement level.

Nakayama (1981, p6) that kata in karate is the logical arrangements of punching, , stricken and in specific directions continue for fifty Kata or " official exercises " practiced in present time and some of them have been inherited from generation to generation and others has been recently constructed.

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Ahmed Mahmoud Ibrahim (2005, p27, 285 - 287)

argued that "Kata" is considered performing international accepted succession from defensive and offensive styles of blocking, punching, striking and kicking in different directions and differentiated conflicts directed to the three attacker's body levels or group of dummy attackers by taking different and numerous valance positions.

"kata" can be defined as coherent series of combination of motor performance, consisting of defensive and offensive methods performed y the player in internationally regulated sequence against a group of dummy competitors, in different directions, speeds and strength vary according to competitive position.

Ahmed Mahmoud Ibrahim (2005, p:284) adds that during dummy fight "kata" competitions with international movement pattern, we find that player requires participation in the competition throughout the day in same tournament "e.g. individual " including introductory, semi final and final rounds with commitment to perform internationally reglated movement pattern, in terms of motor performance sequence, offensive and defensive methods' speed and strength, as well as compound skills forming movement pattern, also added to this match load for explanation and practice of movement pattern components Albonkaa Bunkai" and that the team that reaches the final, which increases the effects of pregnancy Alambaraúa on different devices.

There in five karate schools 4 of them certified by World Karate Federation (WKF) Which are: - Shotokan, Shito-Ryu, Goji - Ryu, and Wado; each of these schools have number of movement patterns (Kata) " players perform from it as per Karate international law, and performance may be mandatory required; therefore each school have (2) compulsory katas "Shitei - Kata" determined by WKF, while the remaining Kata are optional "Touki - Kata" which the player or team can choose from it what will be performed during semi-final and final roles in the competition. All these schools with around 50 internationally classified Katas follow two karate basic styles . Each of them found and developed separately and have it is own philosophy, both in Kata performance

methods and also in training methods of these and its rhythm.

The first one is Shorei Style which depends in Kata and offensive and defensive methods on streamline performance and prorated sudden movement with using narrow balance positions like "Sanchin Dachi", Shiko Dachi with using speed relatively greater than strength during this style Kata performance , Kata in this methods (e.g., and not limitesd to) are :: - " Tekki, Jion, Hangetsu, Jutte, Sochin".

The second style is Shoren Style, which depends on streamline performance with movement with rotation between speed and slowness during defensive and offensive methods' performance with availability of individual integrated skills individually in full compatibility during Kta performance, "Shoren" also characterized by achieving synchronization in terms of speed and strength during Kata components' performance which appear as special rhythmic for each Kata components. Player in this style take wide basic positions like Zenkutus Dachi, Kokut su Dashi, Kiba Dachi "and falls under this style Katas like: Kanku - Dai, Empi, Ganka ku, and Unsu, Gojushiho sho.

Unsu Kata and its Charectrestics:

Ahmed Ibrahim (2005, p193) Unsu Kata means (clouds' hands) and have 52 styles, its performance time 90 seconds and is considered one of the most difficult Katas in terms of performance.

Unsu Kata featured characteristics

- Overall performance time: 90 seconds
- Defensive styles: 27 styles
- Offensive styles: 23 styles

Percentage of energy system prevailing during performance:

Aerobic 10%, phosphate- anaerobic 70% , lactic –anaerobic 20%

Unsu Kata most important physical and psycho-motor requirements

* Power Strength endurance
* Speed endurance
* skill performance endurance

Figure (1)
Unsu Kata components structure, skill , offensive and defensive balance styles , balance positions and feet work (Ahmed Ibrahim,2005, p193)
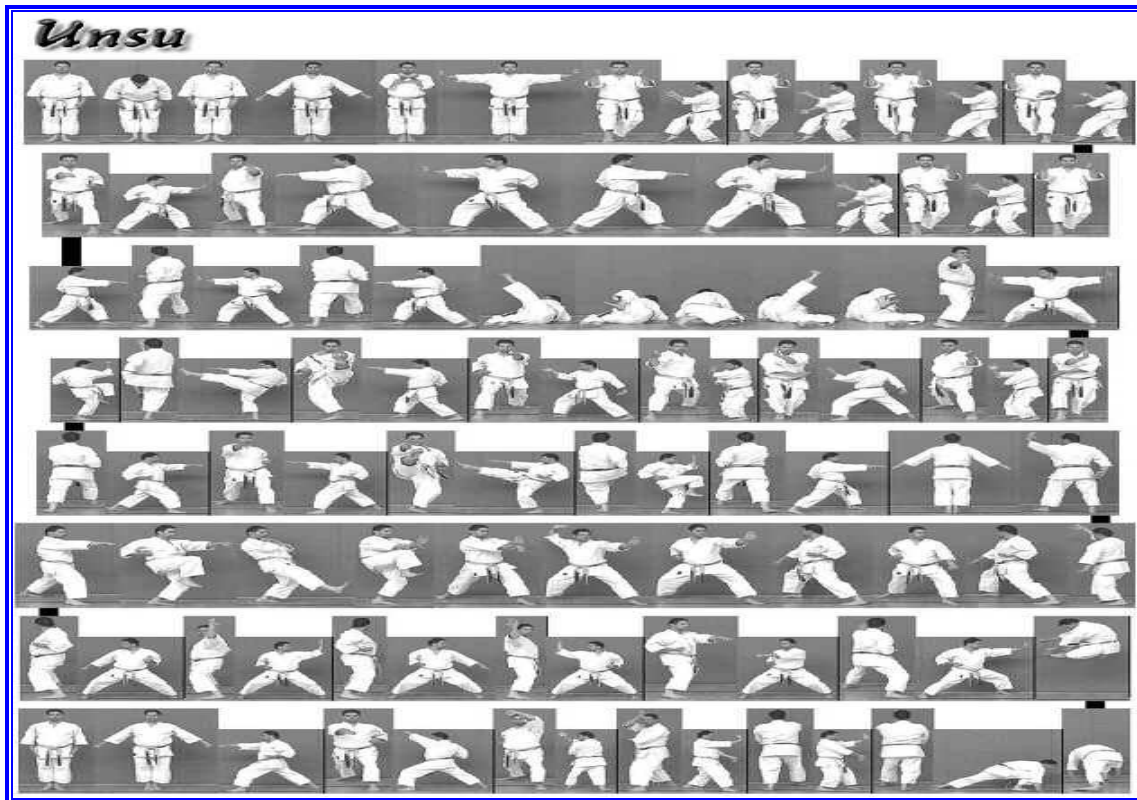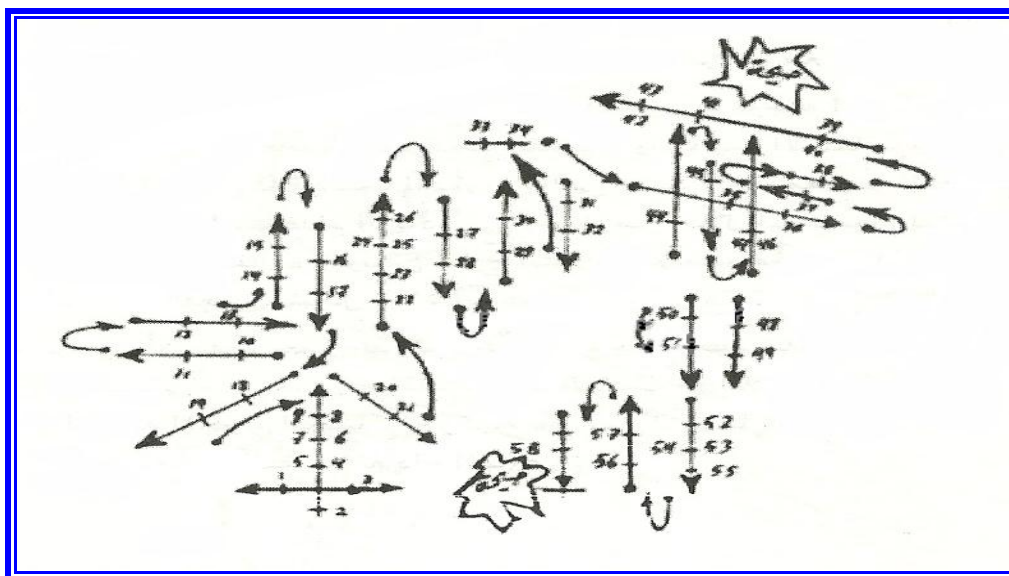

Figure (2)
Performance track of Unsu Kata components structure, skill , offensive and defensive balance styles, balance positions and feet work (Ahmed Ibrahim,2005, p193)

Bio- rhythm is considered one of the modern science used in physical education field as each individual's work efficiency vary according to different day times which work performed in; in the sports field we must describe bio-rhythm importance in terms of higher sports results in terms of athletic records, and performance levels during international and Olympic tournaments which make it clear that using scientific research is important to find new ways to increase sports training effectiveness and develop new trends related to specialized sport activity nature, first step to excel in specific activity is the appropriate selection for players suits it , which requires availability of special biological, physical and skill parameters , with

scientific training programs which are considered the cornerstone of athlete making.

Aboulela Abdel Fattah and Subhi Hassanein (1997, p: 391) argues that bio-rhythm include more than 400 body functions, where is body temperature is bio-rhythm in its lowest degrees in the morning and body temperature goes up until it reaches its maximum at six o'clock pm as well as that kidney and endocrines bio-rhythm during 24-hour period shows they are more active during the first hours of the day (morning). While Sleep, wakeup, work and rest are the main bio-rhythms that all bio-rhythms of the various body systems are connected. (7: 391)

Ali ElBek and Sabri Omar (1994, p47-48) mentioned that daily bio-rhythm for functional activity of nervous and work system is playing the main role of synchronization of all processes that occur in repeated cycles as daily changes in nervous system in humans are closely related to sleep and waking cycle

From what previously mentioned it is easy to identify bio-rhythm importance and its role in influencing physical parameters which affect human body vital system' efficiency and its capabilities to work throughout the day and how important is that for physical activity in general and specially in developing new training methods. Therefore scientific studies and researches trying to identify the most important physical , skill and functional requirements suits

sports activity nature and affect positively training process effectiveness to reach high athletic levels, so it is clear this study importance trying to explore the bio-rhythm dynamic track for some skill-physical parameters for Unsu kata components structure as an indicator for training periods' planning for karate.

Study procedures:

Methodology:
Descriptive approach was used as it appropriate for study nature and objectives.

Human domain:
Sample was selected intentionally totaled to (12) player registered as Kata players in Victoria club under 16 years age during sports season 2010 - 2011.

Time domain:
Main experiment performed in the period November 1st, 2010 to November 30th , 2010

Kata skills measurement test:
- Evaluation test for some physical - skills parameters for Unsu Kata components in specific times 9 and11 am, 1 , 3, 5 , 7 and 9 pm,

- Statistical work: Researcher used one way ANOVA test , and LSD test. All work done using SPSS ver. 11.

Results and Discussions:

Figure (3)
Dynamic track for monthly bio- rhythm values for Kata players (No 1) during November 2010 under study
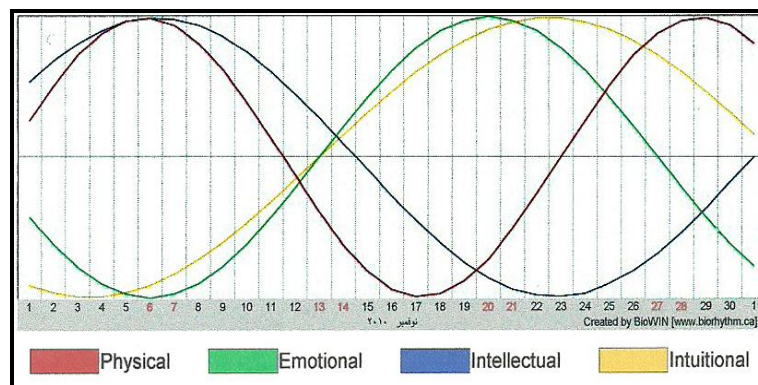
Figure (4)
Dynamic track for monthly bio- rhythm values for Kata players (No 2) during November 2010 under study

Figure (5)
Dynamic track for monthly bio- rhythm values for Kata players (No 3) during November 2010 under study

Figure (6)
Dynamic track for monthly bio- rhythm values for Kata players (No 4) during November 2010 under study
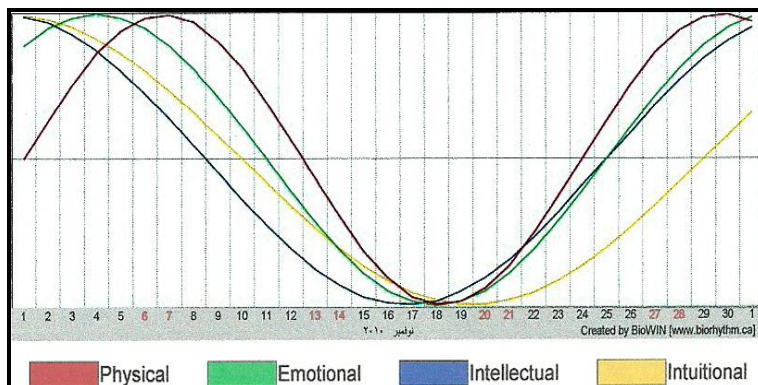
Figure (7)
Dynamic track for monthly bio- rhythm values for Kata players (No 5) during November 2010 under study
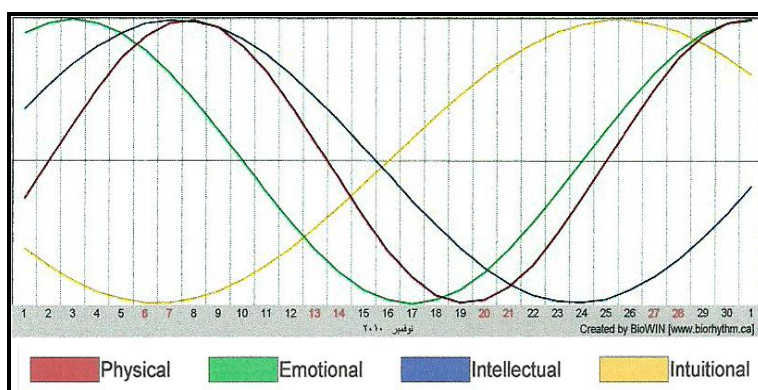

Figure (8)
Dynamic track for monthly bio- rhythm values for Kata players (No 6) during November 2010 under study

Figure (9)
Dynamic track for monthly bio- rhythm values for Kata players (No 7) during November 2010 under study

Figure (10)
Dynamic track for monthly bio- rhythm values for Kata players (No 8) during November 2010 under study

Figure (11)
Dynamic track for monthly bio- rhythm values for Kata players (No 9) during November 2010 under study

Figure (12)
Dynamic track for monthly bio- rhythm values for Kata players (No 10) during November 2010 under study
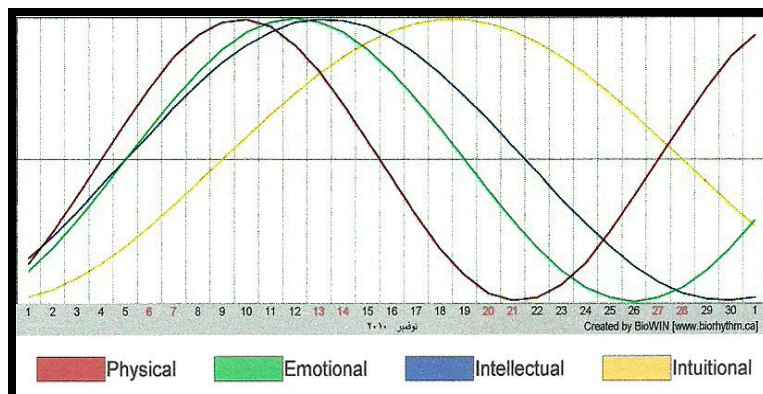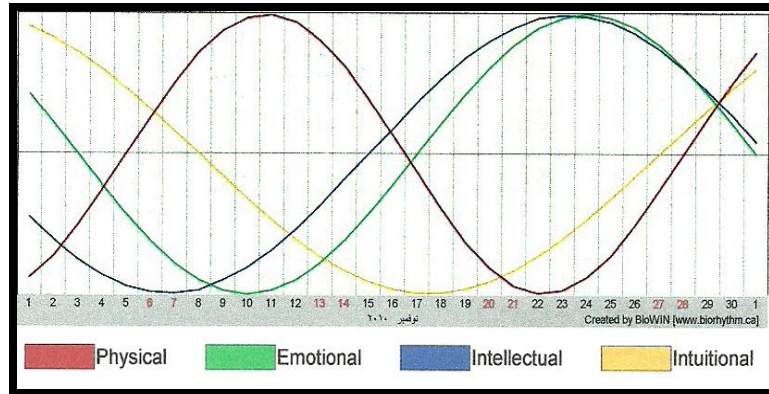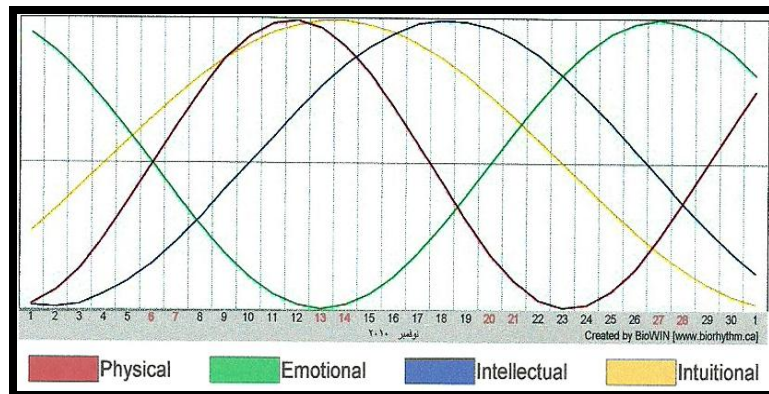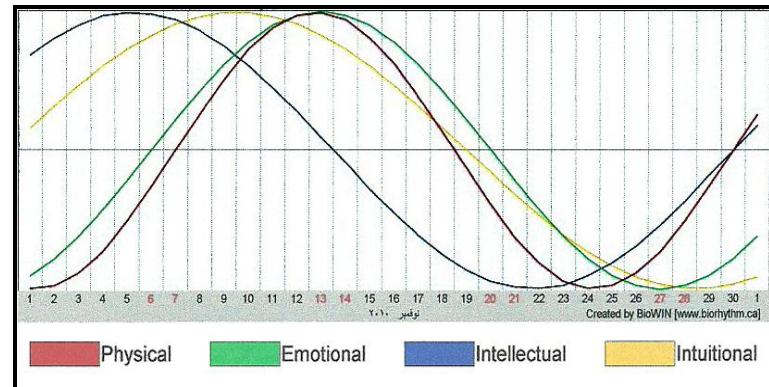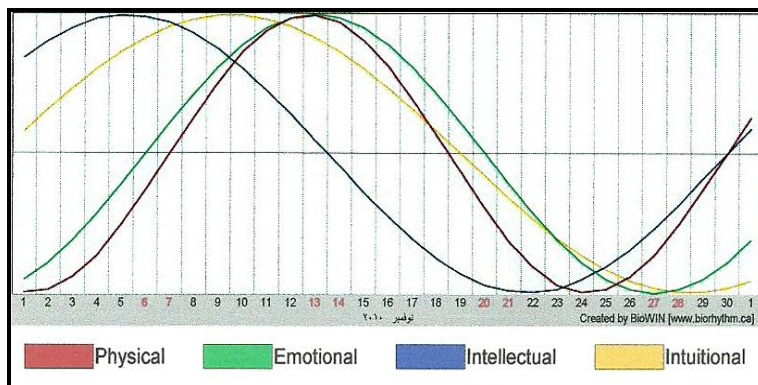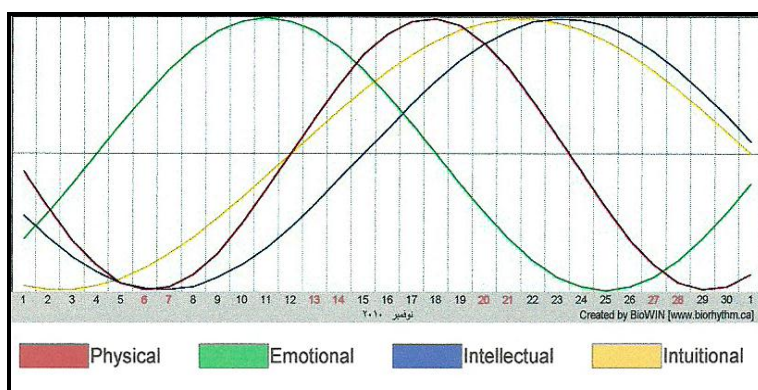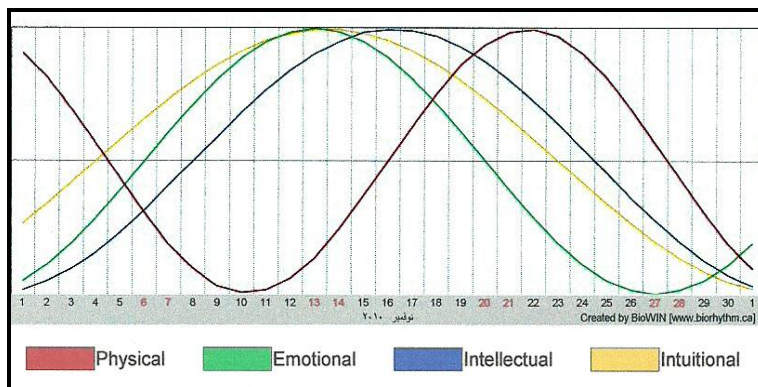

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Table (1)
ANOVA test of "power" skill- physical variable values for skill styles of Unsu Kata component structure during various measurement times for Kata players

Statistics / Study variables	Player's performing side	Variance source	Sum of Squares	DF	Mean Square	F
Lower block (Gedan-Bari)	Left Hidar	Between Groups	124.909	6	20.818	42.633*
		Within Groups	340.182	70	0.488	
		Total	159.091	76		
Lower block (Gedan-Bari)	Right Migi	Between Groups	111.974	6	18.662	44.352*
		Within Groups	29.455	70	0.421	
		Total	141.429	76		
Knife hand block (Shuto-Uke)	Left Hidar	Between Groups	7.714	6	1.286	3.094*
		Within Groups	29.091	70	0.416	
		Total	36.805	76		
Knife hand block (Shuto-Uke)	Right Migi	Between Groups	17.169	6	2.861	10.015*
		Within Groups	20.000	70	0.286	
		Total	37.169	76		
Lunge punch (Oi-Zuki)	Left Hidar	Between Groups	2.727	6	0.455	1.667
		Within Groups	19.091	70	0.273	
		Total	21.818	76		
Lunge punch (Oi-Zuki)	Right Migi	Between Groups	3.091	6	0.515	1.983
		Within Groups	18.182	70	0.260	
		Total	21.273	76		
Reverse Punch (Gyaku-Zuki)	Left Hidar	Between Groups	125.610	6	20.935	21.155*
		Within Groups	69.273	70	0.990	
		Total	194.883	76		
Reverse Punch (Gyaku-Zuki)	Right Migi	Between Groups	81.273	6	13.545	20.135*
		Within Groups	47.091	70	0.673	
		Total	128.364	76		
Side snap kick (Yoku-Geri)	Left Hidar	Between Groups	30.805	6	5.134	11.696*
		Within Groups	30.727	70	0.439	
		Total	61.532	76		
Side snap kick (Yoku-Geri)	Right Migi	Between Groups	33.091	6	5.515	16.589*
		Within Groups	23.273	70	0.332	
		Total	56.364	76		

Values of "power" skill- physical variable values for skill styles of Unsu Kata component structure under study

Figure (13) Bio-rhythm daily track for values of "power" (Lower block left (Hidar Gedan-Bari)) skill-physical variable values for under study during various measurement times for Kata players
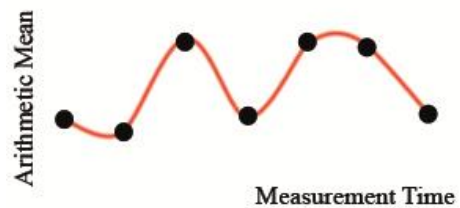

Figure (14) Bio-rhythm daily track for values of "power" (Lower block right (Migi Gedan-Bari)) skill-physical variable values for under study during various measurement times for Kata players
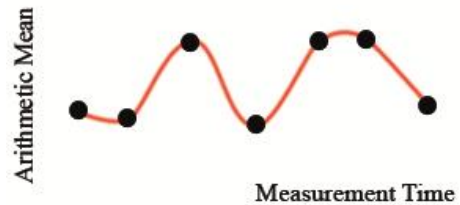
Figure (15) Bio-rhythm daily track for values of "power" (Knife hand block left (Hidar Shuto-Uke)) skill- physical variable values for under study during various measurement times for Kata players

Figure (16) Bio-rhythm daily track for values of "power" (Knife hand block right(Migi Shuto-Uke)) skill-physical variable values for under study during various measurement times for Kata players

Figure (17) Bio-rhythm daily track for values of "power" (Lunge punch left (Hidar Oi-Zuki)) skill-physical variable values for under study during various measurement times for Kata players

Figure (18) Bio-rhythm daily track for values of "power" (Lunge punch right (Migi Oi-Zuki)) skill-physical variable values for under study during various measurement times for Kata players

Figure (19) Bio-rhythm daily track for values of "power" (Reverse Punch left (Hidar Gyaku-Zuki)) skill-physical variable values for under study during various measurement times for Kata players

Figure (20) Bio-rhythm daily track for values of "power" (Side snap kick left (Hidar Yoku-Geri)) skill-physical variable values for under study during various measurement times for Kata players
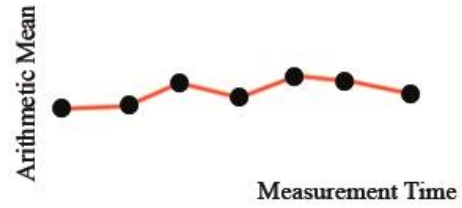
Figure (21) Bio-rhythm daily track for values of "power" (Side snap kick right (Migi Yoku-Geri)) skill-physical variable values for under study during various measurement times for Kata players
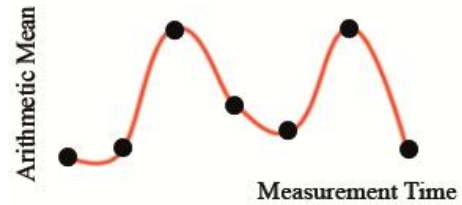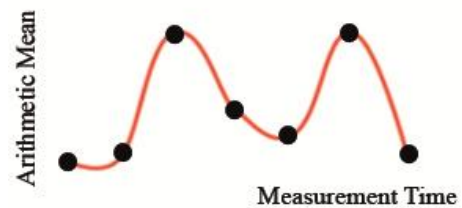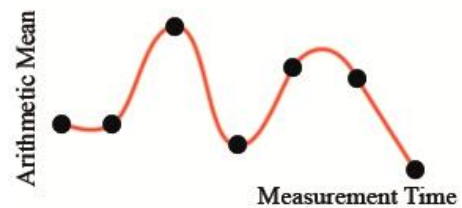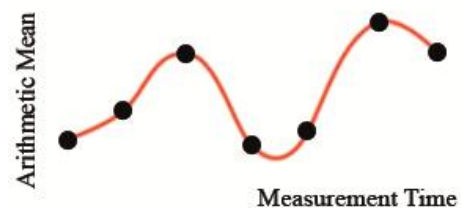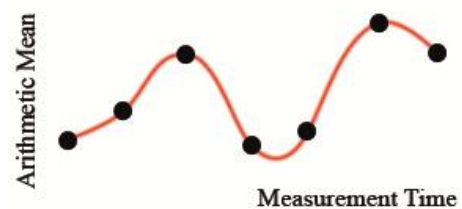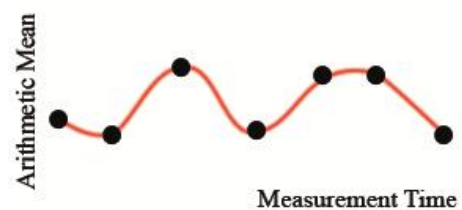
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Table (2)
Differences significance for "power" skill- physical variable values for Lower block left (Hidar Gedan-Bari) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	3.4545	0.3636	↑2.727*	0.1818	↑2.657*	↑2.455*	0.1818
2	11 am	3.0909		↑3.091*	0.5455	↑3.020*	↑2.818*	0.5455
3	1 pm	6.1818			2.55*←	0.071	0.2727	2.55*←
4	3 pm	3.6364				↑2.475*	↑2.273*	0.0000
5	5 pm	6.1111					0.202	2.48*←
6	7 pm	5.9091						2.27*←

Table (3)
Differences significance for "power" skill- physical variable values for Lower block right (Migi Gedan-Bari) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	3.1818	0.0909	↑2.455*	0.4545	↑2.374*	↑2.273*	0.2727
2	11 am	3.0909		↑2.546*	0.3636	↑2.465*	↑2.364*	0.3636
3	1 pm	5.6364			2.91*←	0.0808	0.1819	2.18*←
4	3 pm	2.7273				↑2.828*	↑2.727*	0.727
5	5 pm	5.5556					0.1011	2.101*←
6	7 pm	5.4545						2.00*←

Table (4)
Differences significance for "power" skill- physical variable values for Knife hand block left (Hidar Shuto-Uke) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	4.3636	0.0909	↑0.727*	0.3637	↑0.969*	↑0.727*	0.4546
2	11 am	4.4545		↑0.636*	0.2728	↑0.879*	↑0.636*	0.3637
3	1 pm	5.0909			0.3636	0.2424	0.0000	0.2727
4	3 pm	4.7273				0.606	0.3636	0.0909
5	5 pm	5.3333					0.2424	0.5151
6	7 pm	5.0909						0.2727

Table (5)
Differences significance for "power" skill- physical variable values for Knife hand block right (Migi Shuto-Uke) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	4.3636	0.1819	↑1.000*	0.1819	↑1.303*	↑0.909*	0.1819
2	11 am	4.5455		↑0.818*	0.0000	↑1.121*	↑0.727*	0.0000
3	1 pm	5.3636			0.81*→	0.303	0.0909	0.81*→
4	3 pm	4.5455				↑1.121*	↑0.727*	0.0000
5	5 pm	5.6667					0.394	1.12*←
6	7 pm	5.2727						0.73*←

Table (6)
Differences significance for "power" skill- physical variable values for Reverse Punch left (Hidar Gyaku-Zuki) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	3.0000	0.1818	↑2.909*	0.1818	↑3.000*	↑2.727*	0.5455
2	11 am	3.1818		↑2.727*	0.0000	↑2.818*	↑2.546*	0.3637
3	1 pm	5.9091			↑2.727*	0.091	0.1818	2.36*←
4	3 pm	3.1818				↑2.818*	↑2.546*	0.363←
5	5 pm	6.0000					0.2727	2.45*←
6	7 pm	5.7273						2.18*←

Table (7)
Differences significance for "power" skill- physical variable values for Reverse Punch right (Migi Gyaku-Zuki) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	3.1818	0.0909	↑2.273*	0.0000	↑2.152*	↑2.000*	0.0000
2	11 am	3.2727		↑2.182*	0.0909	↑2.061*	↑1.909*	0.0909
3	1 pm	5.4545			2.27*→	0.1212	0.2727	2.27*←
4	3 pm	3.1818				↑2.152*	↑2.000*	0.0000
5	5 pm	5.3333					0.1515	2.15*←
6	7 pm	5.1818						2.00*←

Table (8)
Differences significance for "power" skill- physical variable values for Side snap kick left (Hidar Yoku-Geri) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	3.3636	0.1819	↑1.364*	0.0909	↑1.081*	↑1.364*	0.1818
2	11 am	3.5455		↑1.182*	0.091	↑0.899*	↑1.182*	0.3637
3	1 pm	4.7273			1.273*→	0.283	0.0000	1.546*→
4	3 pm	3.4545				↑0.989*	↑1.273*	0.2727
5	5 pm	4.4444					0.2829	1.263*
6	7 pm	4.7273						1.546*→

Table (9)
Differences significance for "power" skill- physical variable values for Side snap kick right (Migi Yoku-Geri) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	3.5455	0.0909	↑1.364*	0.2728	↑0.899*	↑1.091*	0.3637
2	11 am	3.4545		↑1.455*	0.1818	↑0.989*	↑1.182*	0.2727
3	1 pm	4.9091			1.636*→	0.465*→	0.2727	1.727*→
4	3 pm	3.2727				↑1.172*	↑1.364*	0.0909
5	5 pm	4.4444					0.192	1.263*→
6	7 pm	4.6364						1.455*→

Table (1 to 9) results and figures (13-21) reveal that there was change in for "power" bio-rhythm dynamic track for Kata –under study- components structure , All variables ideal rhythm was between (11 am to 1 pm) in morning , and between (5-7 pm) in evening.

This in consistent with what mentioned by Thomas Reilly (1990), Tamer Saleh Absi (2007), Doaa Sayed Ibrahim (2008).

Table (10)
ANOVA test of "special performance endurance" skill- physical variable values for skill styles of Unsu Kata component structure during various measurement times for Kata players

Statistics / Study variables	Player's performing side	Variance source	Sum of Squares	DF	Mean Square	F
Lower block (Gedan-Bari)	Left Hidar	Between Groups	1667.403	6	277.900	390.481*
		Within Groups	49.818	70	0.712	
		Total	1717.221	76		
Lower block (Gedan-Bari)	Right Migi	Between Groups	1290.519	6	215.087	250.176*
		Within Groups	60.182	70	0.860	
		Total	1350.701	76		
Knife hand block (Shuto-Uke)	Left Hidar	Between Groups	290.701	6	48.450	121.126*
		Within Groups	28.000	70	0.400	
		Total	318.701	76		
Knife hand block (Shuto-Uke)	Right Migi	Between Groups	295.039	6	49.173	88.466*
		Within Groups	38.909	70	0.556	
		Total	333.948	76		
Lunge punch (Oi-Zuki)	Left Hidar	Between Groups	649.896	6	108.316	93.292*
		Within Groups	81.273	70	1.161	
		Total	731.169	76		
Lunge punch (Oi-Zuki)	Right Migi	Between Groups	758.883	6	126.481	146.231*
		Within Groups	60.545	70	0.865	
		Total	819.429	76		
Reverse Punch (Gyaku-Zuki)	Left Hidar	Between Groups	915.974	6	152.662	309.342*
		Within Groups	34.545	70	0.494	
		Total	950.519	76		
Reverse Punch (Gyaku-Zuki)	Right Migi	Between Groups	621.714	6	103.619	211.076*
		Within Groups	34.364	70	0.491	
		Total	656.078	76		
Side snap kick (Yoku-Geri)	Left Hidar	Between Groups	272.857	6	45.476	149.644*
		Within Groups	21.273	70	0.304	
		Total	294.130	76		
Side snap kick (Yoku-Geri)	Right Migi	Between Groups	203.714	6	33.952	133.384*
		Within Groups	17.818	70	0.255	
		Total	221.532	76		

Values of "power" skill- physical variable values for skill styles of Unsu Kata component structure under study

Figure (22) Bio-rhythm daily track for values of "special performance endurance" (Lower block left (Hidar Gedan-Bari)) skill- physical variable values for under study during various measurement times for Kata players
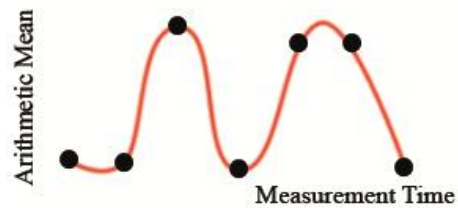

Figure (23) Bio-rhythm daily track for values of "special performance endurance" (Lower block right (Migi Gedan-Bari)) skill- physical variable values for under study during various measurement times for Kata players
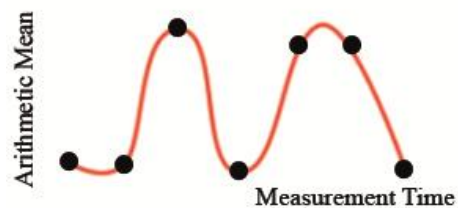
Figure (24) Bio-rhythm daily track for values of "special performance endurance" (Knife hand block left (Hidar Shuto-Uke)) skill- physical variable values for under study during various measurement times for Kata players
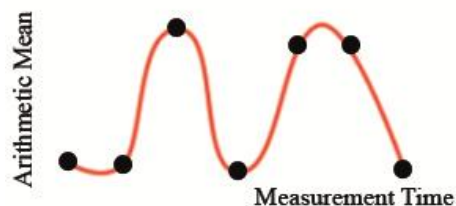

Figure (25) Bio-rhythm daily track for values of "special performance endurance" (Knife hand block right(Migi Shuto-Uke)) skill- physical variable values for under study during various measurement times for Kata players

Figure (26) Bio-rhythm daily track for values of "special performance endurance" (Lunge punch left (Hidar Oi-Zuki)) skill- physical variable values for under study during various measurement times for Kata players

Figure (27) Bio-rhythm daily track for values of "special performance endurance" (Lunge punch right (Migi Oi-Zuki)) skill- physical variable values for under study during various measurement times for Kata players

Figure (28) Bio-rhythm daily track for values of "special performance endurance" (Reverse Punch left (Hidar Gyaku-Zuki)) skill- physical variable values for under study during various measurement times for Kata players

Figure (29) Bio-rhythm daily track for values "special performance endurance" (Reverse Punch right (Migi Gyaku-Zuki)) skill- physical variable values for under study during various measurement times for Kata players

*Figure (30) Bio-rhythm daily track for values of "special performance endurance" (Side snap kick **left (Hidar Yoku-Geri))** skill- physical variable values for under study during various measurement times for Kata players*

*Figure (31) Bio-rhythm daily track for values of "special performance endurance" (Side snap kick **right (Migi Yoku-Geri))** skill- physical variable values for under study during various measurement times for Kata players*
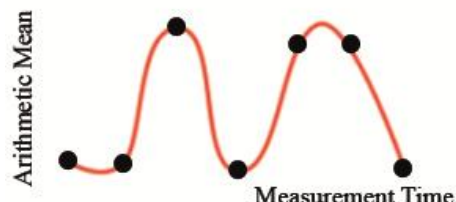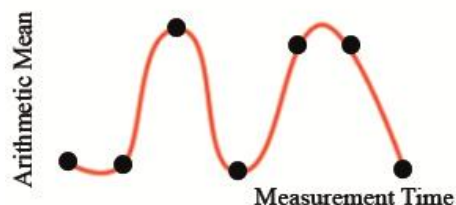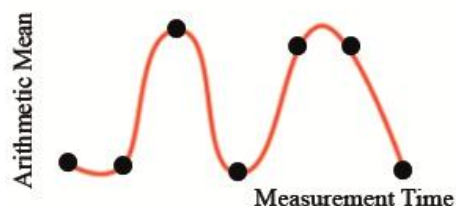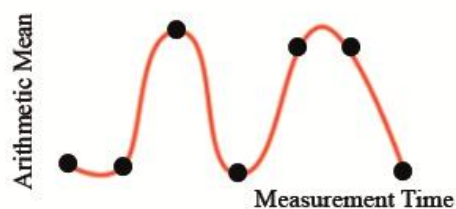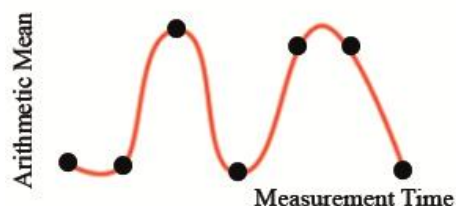

Table (11)
Differences significance for "power" skill- physical variable values for Lower block left (Hidar Gedan-Bari) using LSD test during vxarious measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	4.0000	0.5455	↑9.364*	↑0.818*	↑8.778*	↑8.455*	0.6364
2	11 am	3.4545		↑9.909*	0.2727	↑9.323*	↑9.000*	0.0909
3	1 pm	13.3636			10.18*	0.5858	↑0.909*	10. 0*←
4	3 pm	3.1818				↑9.596*	↑9.273*	0.1818
5	5 pm	12.7778					0.3232	9.41*←
6	7 pm	12.4545						9.1* ←

Table (12)
Differences significance for "power" skill- physical variable values for Lower block right (Migi Gedan-Bari) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	3.1818	0.4545	↑8.546*	0.09091	↑8.262*	↑7.818*	0.0000
2	11 am	2.7273		↑9.000*	0.3636	↑8.717*	↑8.273*	0.4545
3	1 pm	11.7273			← 8.636*	0.2829	0.7273	← 8.546*
4	3 pm	3.0909				↑8.354*	↑7.909*	0.0909
5	5 pm	11.4444					0.4444	← 8.263*
6	7 pm	11.0000						← 7.818*

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Table (13)
Differences significance for "power" skill- physical variable values for Knife hand block left (Hidar Shuto-Uke) using LSD test during various measurement times
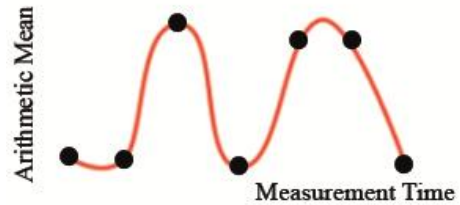
Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	4. 1818	0.2727	↑4.364*	0.4546	↑4.263*	↑3.909*	0.3637
2	11 am	4.4545		↑4.091*	0.1819	↑3.989*	↑3.636*	0.0909
3	1 pm	8.5455			←3.909*	0.1011	0.4546	←4.000*
4	3 pm	4.6364				↑3.808*	↑3.455*	0.0909
5	5 pm	8.4444					0.3535	←3.899*
6	7 pm	8.0909						←3.546*

Table (14)
Differences significance for "power" skill- physical variable values for Knife hand block right (Migi Shuto-Uke) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	4.2727	0.3637	↑4.455*	0.2727	↑4.172*	↑3.818*	0.0000
2	11 am	4.6364		↑4.091*	0.0909	↑3.808*	↑3.455*	0.3637
3	1 pm	8.7273			4.18*←	0.2829	0.636	4.45*←
4	3 pm	4.5455				↑3.899*	↑3.545*	0.2728
5	5 pm	8.4444					0.3535	←4.17*
6	7 pm	8.0909						←3.818*

Table (15)
Differences significance for "power" skill- physical variable values for Lunge punch left (Hidar Oi-Zuki) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	5.7273	0.1818	↑6.000*	0.1818	↑5.717*	↑5.545*	0.1818
2	11 am	5.5455		↑6.182*	0.0000	↑5.899*	↑5.727*	0.0000
3	1 pm	11.7273			←6.182*	0.2829	0.4546	←6.182*
4	3 pm	5.5455				↑5.899*	↑5.727*	0.0000
5	5 pm	11.4444					0.1717	←5.899*
6	7 pm	11.2727						←5.727*

Table (16)
Differences significance for "power" skill- physical variable values for Lunge punch right (Migi Oi-Zuki) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	5.3636	0.1818	↑6.818*	0.0909	↑6.303*	↑6.000*	0.1819
2	11 am	5.5455		↑6.636*	0.2727	↑6.121*	↑5.818*	0.0000
3	1 pm	12.1818			6.91*←	0.515	↑0.818*	← 6.64*
4	3 pm	5.2727				↑6.394*	↑6.091*	0.2728
5	5 pm	11.6667					0.3031	← 6.12*
6	7 pm	11.3636						← 5.818*

Table (17)
Differences significance for "power" skill- physical variable values for Reverse Punch left (Hidar Gyaku-Zuki) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	2.9091	0.4546	↑6.818*	0.2727	↑6.758*	↑6.545*	0.4546
2	11 am	2.4545		↑7.273*	0.1819	↑7.212*	↑7.000*	0.0000
3	1 pm	9.7273			← 7.091*	0.0606	0.2728	← 7.273*
4	3 pm	2.6364				↑7.030*	↑6.818*	0.1819
5	5 pm	9.6667					0.2122	← 7.212*
6	7 pm	9.4545						7.00*←

Table (18)
Differences significance for "power" skill- physical variable values for Reverse Punch right (Migi Gyaku-Zuki) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	2.8182	0.4546	↑6.091*	0.5454	↑5.959*	↑5.545*	0.3636
2	11 am	2.3636		↑6.546*	↑1.000*	↑6.414*	↑6.000*	↑0.818*
3	1 pm	8.9091			← 5.546*	0.1313	0.5455	5.727*
4	3 pm	3.3636				↑5.414*	↑5.000*	0.1818
5	5 pm	8.7778					0.4142	5.596*
6	7 pm	8.3636						5.182*

Table (19)
Differences significance for "power" skill- physical variable values for Side snap kick left (Hidar Yoku-Geri) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	3.3636	0.0000	↑3.818*	0.0909	↑3.303*	↑3.636*	↑0.636*
2	11 am	3.3636		↑3.818*	0.0909	↑3.303*	↑3.636*	↑0.636*
3	1 pm	7.1818			3.73*←	0.510	0.1818	4.46*←
4	3 pm	3.4545				↑3.212*	↑3.546*	0.72*←
5	5 pm	6.6667					0.3333	← 3.939*
6	7 pm	7.0000						← 4.273*

Table (20)
Differences significance for "power" skill- physical variable values for Side snap kick right (Migi Yoku-Geri) using LSD test during various measurement times

Measurement No	Measurement time	Mean	Differences between means					
			11 am	1 pm	3 pm	5 pm	7 pm	9 pm
1	9 am	3.5455	0.1819	↑3.091*	0.3637	↑2.899*	↑2.909*	↑0.636*
2	11 am	3.3636		↑3.273*	0.1818	↑3.081*	↑3.091*	↑0.455*
3	1 pm	6.6364			3.46*←	0.192	0.1819	3.73*→
4	3 pm	3.1818				↑3.263*	↑3.273*	0.2727
5	5 pm	6.4444					0.010	3.54*←
6	7 pm	6.4545						3.55*←

Tables (10 to 20) results and figures (22 to 31) reveal that there was change in "special performance endurance " bio-rhythm dynamic track for Kata –under study- components structure, All variables ideal rhythm was between (11 am to 1 pm) in morning , and between (5-7 pm) in evening.

These may be due to high temperature which was reflected metabolism rate and enzymes contributing to body system endurance for physical effort for skill styles Kata (under study) component structure . this is consistent with what mentioned by Reilly. T. (1990), Aly Elbeck and Sabry Omar (1994), Ahmed Mahmoud Ibrahim (2005).

Conclusions:

Bio-rhythm dynamic track for "Power and special performance endurance" for Kata players reach its highest rate during morning from 11 am to 1 pm, during evening from 5 pm to 7 pm.

Recommendations

1. As per the what concluded above from study's statistics results and in accordance with study procedures   the following could be recommended:

2. Using the highest daily bio-rhythm for physical-skill parameters as indicator when planning training times for Kaa players

3. Conducting further surveys and experimental studies bio-rhythm dynamic track ideal times for other physical-skill parameters for Kata in different Karate schools to be used as an indicator for planning times

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