167 - ACUTE BEHAVIOR OF HEART RATE, BLOOD PRESSURE AND RATE PRESSURE PRODUCT IN ADULT WOMEN DURING A GYMNASTICS SESSION

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Summary: The physical inactivity directly is related to a bigger cardiovascular risk and this social behavior is present in the entire world. The exercise must promote change in health behavior to include the activity physical as habitual. **Objective:** This study investigated which HEART RATE (HR), BLOOD PRESSURE (BP) and RATE PRESSURE PRODUCT (RPP) acute physiological answers resultant of the practical of gymnastics session with predominance force training and in gymnastics session with predominance of the muscular resistance located training (RML) in order to identify the possibility to have a bigger overload imposed to the myocardium. **Methodology:** The study was descriptive 3of transversal analysis and the sample was composed for 8 individuals and an element reference all of the feminine sort. The blood pressure was measured by a digital sphygmomanometer CITZEN® . **Resulted:** It verified the collected group did not present significant difference of the HEART RATE, BLOOD PRESSURE and RATE PRESSURE PRODUCT in sessions with predominance of force training and in session with predominance RML. Already the element reference presented values variable below of the values found in the group in both the analyzed sessions. **Conclusions:** The analyzed group inside of a perspective intra-group did not present significant difference (P< 0,05) enters the averages of the RML sessions and force. When comparing the element reference was observed that in the majority of the averages it met outside of the averages in the two types of session.
Key-words: located gymnastics, blood pressure, heart rate, rate pressure product.

Introduction:

The regular physical activity if makes necessary for a good general health of its practitioners and to spread new habits and concepts of life (ACSM, 1999). Currently, the society is demonstrated changes about health habits and gets conscience of useful physical activity practice, therefore very exists a great demand to the search of alternative places for the practical one of the physical activity, mainly in gymnastics academy (HUNTER, 2003).

The located gymnastics is an activity of the type against-resistance that can provide significant benefits for the physical aptitude, health and quality of life. Polito (2003) speaks that the activities of the type against-resistance are adjusted and recommended the healthful people or with chronic illnesses, in virtue of its contributions to the physical and functional aptitude, beyond the security the people attacks of cardiovascular problems. For this the necessity of a accompaniment of the physiological pointers of the physical effort exists and as parameter to survey the intensity of the physical effort, can be used the HEART RATE (HR) and the BLOOD PRESSURE (BP) contributing to measure the work of the myocardium. The association of the HR and the BP allows to correlate the consumption of oxygen for the myocardium for the call RATE PRESSURE PRODUCT (RPP), being considered as better use without the invasive method (ACSM, 2000).

Objectives:

The study it intends to verify which the acute physiological answers of the HEART RATE (HR), BLOOD PRESSURE (BP) and RATE PRESSURE PRODUCT (RPP) in adult women during the practical one in a gymnastics located session with predominance of force training and RML training.

Methodology: The present study as Mattos et al. (2004) is a descriptive research of field of transversal analysis. The citizens of the study had been 8 women (and an element reference) voluntary, practicing regular of gymnastics located (except the element reference) above of 6 months ages between 37 and 50 years. The sample only participated healthful women (ACSM, 2000), not athlete and had not initiated physical activity since 6 months. The measure had been carried through with digital sphygmomanometer CITIZEN®. The collection was measured seven times during the session: One time before training (five minutes before), two during session (to each fifteen minutes) and four after 30 minutes being to each 5 minutes (completing 30 minutes to session end).

Results: The results are presented in tables below for one better visualization of the data.

Before session				
	SBP	DBP	HR	RPP
Mean RML	106,9(5,7)	71,4(2,1)	76,9(12,7)	8241(963,1)
Mean Force	105,9(0,7)	74,4(10,6)	78,3(4,9)	8230,9(446,2)
Sig.p	0,7555	0,3876	0,8333	0,9899
Results	Same	Same	Same	Same
Comparing	RML = Force	RML = Force	RML = Force	RML = Force

Table 1 : Table of referring data to the average values of HR, (BP) and RPP, during the rest, enters the group (n=8) in the force sessions and RML session. The result of the T-student test comparing two types of session (p< 0,05).

It can be observed that the presented values of the surveyed 0 variable had not gotten significant difference.

Before session				
	SBP	DBP	HR	RPP
RML	90	66	52	4680
Force	104	72	67	6968

Table 2 : Table of analysis of the average values of the analyzed variable of the element reference (n=1) in rest, the session of Force and RML. Table of referring data to the average values of HR, BP and RPP, during 30 min session, enters the group (n=8) of Force session and RML session.

During - 30'				
	SBP	DBP	HR	RP P
Mean RML	120,1(17)	77,6(7,1)	109,1(10,6)	13216,9(3372,9)
Mean Force	115,6(12)	76,9(7,1)	97,6(51,6)	11185,9(4559,4)
Sig.p	0,5300	0,8931	0,2596	0,1651
Results	Same	Same	Same	Same
Comparing	RML = Force	RML = Force	RML = Force	RML = Forc e

Table 3: Table of referring data to the average values of HR, BP and RPP, during 30 min. of session, enters the group (n=8) in the session of Force and RML.

It had not been observed average of the values of the analyzed variable that during the session significant differences.

During - 30'				
	SBP	DBP	HR	RPP
RML	115	71	100	11500
Force	104	66	109	11336

Table 4: The Table shows the average values of the variable analyzed of the element reference (n=1) during 30 min. in Force session and RML session.

After - 30'				
	SBP	DBP	HR	RPP
Mean RML	108,3(13,4)	72,1(14,8)	82,8(6,4)	8946,5(1747,3)
Mean Force	103,8(17)	72,8(21,2)	74,1(2,8)	7665,4(1504,7)
Sig.p	0,1044	0,8701	0,0158	0,0070
Results	Same	Same	Diferent	Diferent
Comparing	RML = Fo rce	RML = Force	RML > Force	RML > Force

Table 5: Table shows data the average values of HR, BP and RPP, after 30 min activity, enters the group (n=8) in the Force session and RML session. In this table can be observed that the result of 0 variable HR and RPP had presented different averages in the two analyzed types of session being bigger in the RML session, however the difference was not significant.

After - 30'				
	SBP	DBP	HR	RPP
RML	99	70	66	6534
Force	97	40	94	9118

Table 6: Table of analysis of the average values of the analyzed variable of the element reference (n=1) after 30 min activity, in Force session and RML session.

Conclusions: It can be concluded that in the two analyzed types of session, one suggests that inside of a perspective intra-group they had not presented significant differences (sig.p < 0,05).In the case of the element reference it is observed that in the majority of the gotten results it presented values below of the averages of the values presented for the group. It can be suggested that such fact has occurred for the practitioner inexperience in the analyzed type of activity, affecting in the way and in the time of execution of the movements, in the motor coordination of the considered gestures and in music rhythm. The hypothesis had not been discarded is the fact of the element reference to be an active and well conditional person physically. Being thus, for the present study the work tax to the myocardium in such a way for the group how much by the element reference it was not raised, being safe how much to the answers of RPP for the agreed effect of the low one of HR and BP in apparently healthful people.

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COMPORTAMENTO AGUDO DA FREQUÊNCIA CARDÍACA, PRESSÃO ARTERIAL E DUPLO-PRODUTO EM MULHERES ADULTAS DURANTE UMA AULA DE GINÁSTICA LOCALIZADA

Resumo:

A inatividade física está diretamente relacionada a um maior risco cardiovascular e este comportamento social está presente no mundo inteiro. O exercício deve promover essa mudança comportamental em relação a saúde de forma a incluir a atividade física como habitual. **Objetivo:** Investigar quais as respostas fisiológicas agudas da freqüência cardíaca (FC), pressão arterial (PA) e duplo-produto (DP) resultantes da prática de uma aula de ginástica localizada com predominância da força e em aula com predominância da resistência muscular localizada (RML) a fim de identificar a possibilidade de haver uma maior sobrecarga imposta ao miocárdio. **Metodologia:** O estudo foi descritivo de campo de análise transversal e a amostra foi composta por 8 indivíduos e um elemento referência todas do gênero feminino. Para a coleta dos dados foi utilizado um esfigmomanômetro digital CITIZEN **Resultados:** Verificou- se o grupo coletado não apresentou diferença significativa da freqüência cardíaca, pressão arterial e duplo-produto em aulas com predominância da força e em aula com predominância RML. Já a elemento referência apresentou valores das variáveis abaixo dos valores encontrados no grupo em ambas as aulas analisadas. **Conclusões**: O grupo analisado dentro de uma perspectiva intra-grupo não apresentou diferença significativa (si. P< 0,05) entre as médias das aulas de RML e força. Ao comparar a elemento referência observou-se que na maioria das médias encontrou-se fora das médias nos dois tipos de aula .

Palavras-Chave: ginástica localizada, pressão arterial, freqüência cardíaca, duplo-produto.