196 - LEVEL OF HABITUAL PHYSICAL ACTIVITY AND CARDIAC RISK OF DOCTORS IN THE REGION OF CARIRI-CE, BRAZIL

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INTRODUTION:

The society's development has been followed by the reduction of morbidity and mortality for infect-contagious illnesses, and it has incresed the predominance of the chronic-degenerative illnesses, such as arterial blood hypertension, coronary heart disease, obesity and diabetes mellitus. These illnesses are caused by several of organic disorders associated with redution in the movements, named as hypoKinetic disorders, which can affect people who correspond with lower level of practice in physical activity. Guedes and Guedes (1995), affirm that the advance in technology has a significant contribution to raise the standard of living of the modern man, but at the same time it is causing a series of risks for ones health. The inactive or sedentary lifestyle, caused by the modern technology, is contributing in potential to lots of chronic-degenerative illnesses that can, in one way or the other, affect directly ones health, and making one incapable to fulfill certain tasks of the daily routine or, even leading it to death in a premature way.

The physical activity is understood as any voluntary corporal movement with energy expense above the rest levels (CASPERSEN, POWELL and CHRISTENSON, 1985), including physical exercises, sports, dances, fights and other activities of leisure, such as, domestic activities, active displacements, occupational activities and other activities of the daily life consist of alternatives that can make people more healthful. In this direction, it can be affirmed that the concept of sedentary is not associated necessarily with the lack of a sportive activity, but a reduction in caloric expenses per week, being considered as sedentary the individual who does not achieve caloric expenses superior the 1500 Kcal per week, related the occupational activities (GRANDSON, 2005). Authors as Silva (1999) defend that the adoption of a not sedentary lifestyle, based on regular physical activity, decreases the possibility to development the majority of chronic-degenerative illnesses, having a preventive impact equivalent to what the immunization represents in the attempt to control infect-contagious illnesses, beyond serving as promotional component on the change of countless factors of risk which go along with others illnesses.

Several studies have demonstrated the existing association between the changes in the habits on physical activity and the mortality risk, in which the individuals that had adopted moderately vigorous physical activity (4,5 intensity > MET's) comparing to the ones that had never participated of this type of activity, showed a risk of death 41% lower of coronary heart disease, and the increase in total expended energy superior the 1500 Kcal/week during the leisure hours; it promoted a reduction of 28% in the risk of mortality in all causes (ACSM, 2003). Matsudo (2006) points out research showing that physical activity also has positive impact in other risk factors, as the arterial blood pressure, kinds of lipoprotein and glucose tolerance that influence on health and longevity. Studies carried out with 25.341 male patients followed per 8,4 years and classified in three levels of physical conditioning (high, intermediate and low), have observed a strong inverse association between the level of physical conditioning and mortality on cardiovascular illnesses in individuals with and without risk factors (cigarettes, cholesterol and high blood pressure).

In spite of its relevance, the physical activity isn't the unique element to be considered as determinant to cardiac risk. Some factors must be considered when correlating the levels of habitual physical activity and cardiac risk, as the relation that familiar antecedents constitutes as a not modifiable and independent risk factor, though still needing extensive studies. Patients with relatives at first degree affected by coronary heart disease have bigger risks to develop coronary arterial disease than the population in general (SHIMODA et al. 1996).

Thus, it becomes necessary to study the context and not only isolated determinants due to multicausal characteristic intrinsic to the phenomenon health - illness. In the same way, the eventual practice on physical activity does not presents the same benefits that a regular practical does, and it can also becomes attitude of risk. In this direction, several studies are being carrying out in attempt to identify the main determiners for adoption and maintenance of physical active lifestyle, existing in addition the necessity of accomplish researches that points the variable determiners on the practice in physical activity, considering social, environment, economic and professional differences in Brazilian's population.

In this perspective, the main question of this study was: Does the level of habitual physical activity, lifestyle and cardiac risk have a correlation and reflect high health level? This study becomes excellent once it was applied directly to individuals that work on the area of health, once it makes possible to verify any possibility of associations between determinants behaviors on lifestyle and cognitive knowledge about habitual physical activity as preventive factor to chronic-degenerative illnesses. Therefore, The objective of the research consisted in correlating the levels of habitual physical activity and cardiac risk in doctors in the region of Cariri.

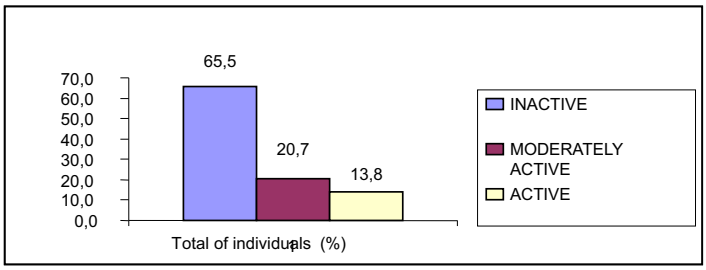
METHODOLOGY:

This study is characterized as field, transversal line, quantitative and of descriptive character. The sample was composed for 29 doctors, being 17 men with average of age 42,5 11,0 years old and 12 women with average of age 34 6 years old, at random selection among private and public institutions of health in the region of Cariri - Ceará. The used instruments consisted of Questionnaire of Habitual Physical Activity, translated of Russel R. Pate and cited in Nahas (2001) that it obeys a scale of inactive (INA) (0-5pts), moderately active one (MOA) (6-11pts), active (AT) (12-20), very active (MA) (21 or more pts.) to the related variable to the habits of practice of physics and the Control of Cardiac Risk (modified of Pollock; Wilmore, 1993). The contact with the sample was done by telephone and personally, to schedule the exposition about the objective of the research and, being signed the Term of Free Assent and explanation (TCLE as acceptance was), according to protocol of the Health department 196/96, to research with human beings, and rights after they applied the questionnaires. The professionals could take any doubts in the questions, but without the researcher interfering in the answers. For the analysis the data, the program SPSS 13,0 for statistics of average was used, shunting line standard (DP), maximum and minimum, and qui-square of Pearson.

RESULTS AND DISCUSSION:

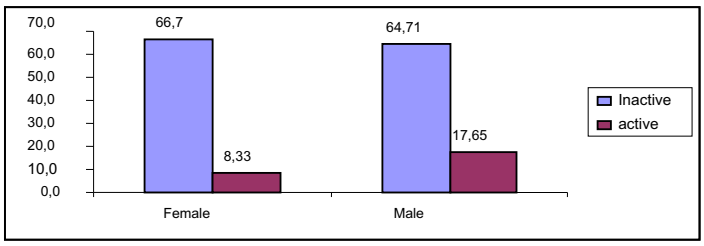
Initially the level of habitual physical activity of the doctors was analyzed, observing the prevalence of 65,5% of inactive individuals, 20.7% moderately active and only 13.8% active, as Graphical 1, demonstrating that although they know the benefits that physical activity promotes on health, the majority of the searched professionals does not include it on their routine. Comparing these

data with the results found by Silva, Telles, Melo et al (2003), that analyzed the levels of physical activity among professionals of health, doctors from the city of Aracajú, significant differences was observed, once 51.6% of the investigated ones had been classified as active, insufficiently active 25.81% as, very active 16.13% and inactive 6.45%. Similar results to the present research had been found in studies carried out by Grisa and Madureira (2005), with the intention to know the lifestyle of 37 professionals of health of Marshal Cändido Rondon, where a negative profile to the components of physical activity was demonstrated.



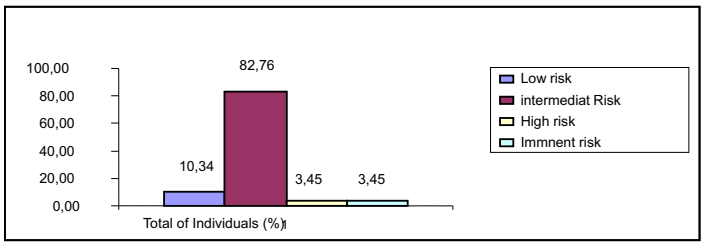
Graph 1: Classification of the Level of Habitual Physical Activity

When compared the levels of habitual physical activity between the sex, one evidenced that 66.7% of women and 64.7% of men are classified as inactive and only 8.33% women and 17,65% men are active as shows graph 2. In this direction, a bigger concern, was observed, in the maintenance of an active lifesty among men.



Graph 2: Relation between Level of Habitual Physical Activity and sex

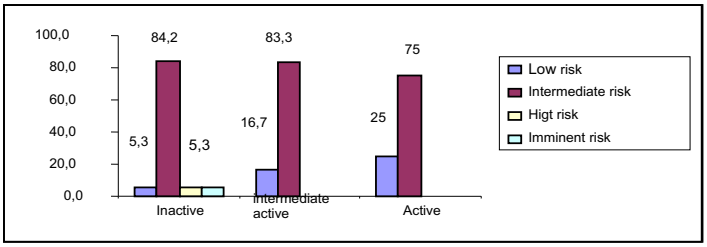
By means of analysis of the referring data to the classification of the cardiac risk, were verified that 82.76% are intermediate risk, 10.34% risk low e 3.45% high and imminent risk, as graphical 3. The predominance of intermediate and low cardiac risk in the group can be an accommodation factor not to adhere a program of habitual physical activity, causing in the long run an important factor of predisposition to develop cardiac risk.



Graph 3: Classification of the Cardiac Risk

In this direction, it becomes necessary to identify the indicative boundaries and verify the prevalence of others factors of risk for coronary heart disease, as systemic hypertension, tobaccos, dyslipidemia, obesity, sedentary lifestyle, diabetes mellitus and familiar antecedents, and in addition, to know the prevalence of these factors of risk, isolated or gathered, once it is through its reduction, with programs of primary and secondary prevention, that one will objectify the effectiveness of any program of health (GUS; FISCHMANN; MEDINA, 2002).

Among these factors, the exercises, even in moderate levels, have protective effects against the coronary disease and on all the mortality causes, and a series of other benefits as: rising HDL-cholesterol level, reduction of blood pressure and helps in lowing body weight. When relating the level of habitual physical activity and cardiac risk, as graphical 4, it was found among the inactive individuals, 84.2% of doctors are intermediate risk and 5.3% of low, high and imminent risk; Among the moderately active ones, 83.3% intermediate risk and 16.7% of low risk; whereas among the active, 75% are intermediate risk and 25% low risk. In accordance with what was observed, the individuals that present high and imminent risk are among the inactive ones, which were not found in doctors with moderately active and active levels of physical activity.



Graph 4: Relation between Level of Habitual Physical Activity and Cardiac Risk

In accordance with Cunningham cited by Columbus and Aguillar (1997), the factors of cardiac risk can be classified in modifiable and not modifiable. The not modifiable ones include age, sex, race and familiar history of the illness. The modifiable ones, that is, those on which the individual or even the health team can act, are the dyslipidemia, arterial hypertension, tobacco, Diabetes Mellitus, sedentary lifestyle, stress and obesity. Goldman and Cook (apud Columbus and Aguillar, 1997) had estimated that more than half (54%) of the decline of the rate of mortality on cardiovascular disease in the U.S.A. between 1968 and 1978 was related to the changes of lifestyle, that is, in the change of the modifiable factors of risk, demonstrating the association of cardiac risk and lifestyle, thus showing the necessity to include more healthful habits in one day-by-day, such as the practice of physical activity. Once it has been considered, from several studies, that the physical inactivity and the low level of conditioning have been considered factors of

risk to premature mortality as important as tobacco, dyslipidemia, diabetes and systemic hypertesion (POLLOCK, 1993).

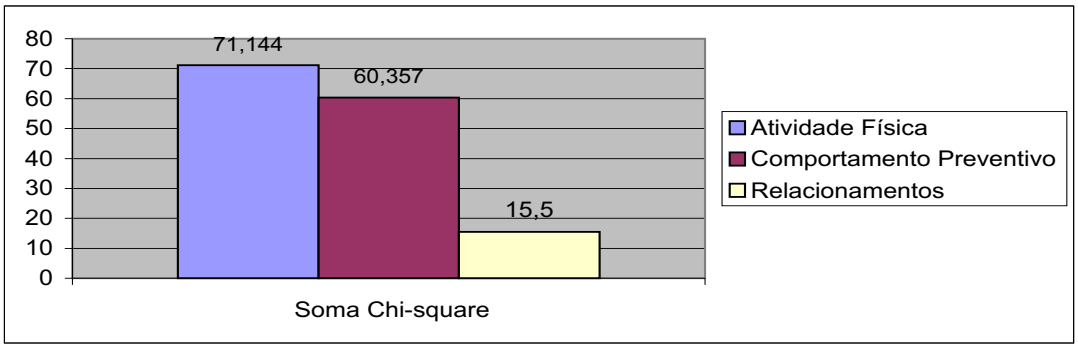
In this perspective, the association between the cardiac risk and the behaviors adopted by the studied group was analyzed in some aspects as nutrition components, physical activity, preventive behavior, relationships and control of stress translated of Russel R. Pate cited and in Nahas (2001). The results are detailed in the table nº 01

Table nº 01: inferential statistics of Chi-square between cardiac risk and the behaviors adopted (N=29)

Behaviors	Chi-square(a,b)	Df	Asymp. Sig.
You pratice at least 30 min of moderate/intense physical activities, in a continue or accumulated way, 5 or more days in the week.	33,429	3	,000
At the least two times per week you pratice exercises that involve force and muscular stretching out.	16,286	3	,001
In your daily routine, you walk or ride bycicle as a transport and prefer to use stairs instead of elevator.	21,429	3	,000
You know your blood pressure, your cholesterol levels and tries to controls them	12,857	3	,005
You do not smoke and do not drink more than a dose per day.	25,786	2	,000
You respect the rules of transit (pedestrian, bicycle rider or driver); if you drive you always use the security belt and never drink alcohol.	21,714	3	,000
You try to cultivate friends and you are satisfied with your relationships.	15,500	1	,000

***p<0,05 Significant end **p>0,05 No Significant**

Observing the values of table 1, one perceives that the behaviors with higher degree of association to the cardiac risk are the praised ones in relation to the physical activities component, preventive behavior (3 answers for each), and relationships (1 reply). The degree of association among the behaviors is illustrated in graph 05



Graph 5. Association between modifiable behaviors and cardiac risk.

Thus one perceives that the modifiable behaviors are associated to the cardiac risk what suggest that these can become protection factors and, therefore, necessarily include them in programs of prevention to cardiac risk.

CONCLUSION:

The life style and the levels of habitual physical activity are aspects that are found associated to cardiac risk in this studied population. The data show that the inactivity is a prevalent factor in this population, as much male as female one, even tough it perceives a bigger concern in the maintenance of an active lifestyle among men. This assertive is corroborated by the level of identified cardiac risk, that even presenting an average standard, it already points high and imminent risks between the classified ones as inactive. This data become more preoccupying when one evaluates that the addition of high and imminent risks already exceeds 50% of the percentage of the people with low risk and that this factor is only found in the group classified as inactive. In this direction the modifiable behaviors mainly are associated to cardiac risk in relation to the aspect of physic activity and the preventive behaviors. Thus one conclude from this study that the participants of this research may increase the predisposition to cardiac risk, occurring a trend in the direction of intermediate to high and imminent risk, and being the physical activity and the preventive behaviors the factors more associates to it. Therefore, one suggests that a work of spreading the results of this research should be done as a form of touching the people to take decision in the direction of changing lifestyle and the levels of physical activity.

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LEVEL OF HABITUAL PHYSICAL ACTIVITY AND CARDIAC RISK OF DOCTORS IN THE REGION OF CARIRI-CE, BRAZIL

SUMMARY: The risks to our health from a sedentary lifestyle has become a worldwide problem to public health. This study aimed to observe the levels of habitual physical activity(LHPA), lifestyle(LS) and cardiac risk(CR) of doctors in the region of Cariri - CE. It is characterized as field, transversal line, quantitative and descriptive research. The sample was composed by 29 doctors, being 17 men and 12 women, chosen at random selection among institutions of health in the region of Cariri - Ceará. The used instruments included the Questionnaire LHPA, translated of Russel R. Pate and cited in Nahas (2001) and the Control of Cardiac Risk (modified of Pollock; Wilmore, 1993). For the analysis of these datas, the program SPSS 13.0 was used. The results had demonstrated that regard to the LHPA that, 65.5% of the searched doctors are inactive, 20.7% moderately active and 13.8% active; As regards to the cardiac risk classification, it was verified that 82.76% are intermediate cardiac risk, 10.34% are low and 3,45% high and imminent. Analyzing the relation of LHPA and CR, were observed among the inactive ones that, 84.2% are intermediate risk and 5.3% low, high and imminent risk; Among the moderately active ones, 83.3% are intermediate risk and 16.7% low risk; Among the actives, 75% had presented intermediate risk and 25% low risk. One perceives that the behaviors with bigger degree of association to the cardiac risk are praised in relation to the components of the physical activity, preventive behavior (3 answers for each), and relationships (1 reply). Conclusion: the participants of the research are predispose to an increase in the predisposition to cardiac risk, occurring a trend in the direction from intermediate to high and imminent risk, and being the physical activity and the preventive behaviors, factors which are the most associated to it.

Key-words: habitual physical activity, cardiac risk, doctors

NIVEAUX D' ACTIVITÉ PHYSIQUE HABITUEL (NAPH) STYLE DE VIE (S.V) ET RISQUE CARDIAQUE (RC) DE MÉDECINS DANS LA RÉGION DU CARIRI - CE, BRÉSIL

RÉSUMÉ:

Lês risques de santé d' um style de vie sédentaire sont devenus un probléme mondial de santé publique. L´ objectil de celte étude est de vérifier les niveaux d' activité physique habituel (NAPH), le style de vie (S.V) et le risque cardiaque (RC) chezdes médecins de la région du Cariri - CE. La recherche a été paite sur le terrain et est transversale, quantitative et de caractére descriptil. L' é chantillon a été compasé de 29 médecins, sélectionné aléatoirement entre les institutions de santé de la région. Les instruments utilises ant été le questionnaire NAPH et style de vie (NAHAS, 2001) et le contrôle de risque cardiaque (modifié de Polloch ; Wilmore 1993). Pour l' analyse des données, il a été utilisé le programme SPSS 13.0. les résultats démontrent qu'en relation au NAPH, 65,5% des médecins étudies sont inactifs, 20,7 moderement actifs et 13,8% actifs. Quant à la classification du resque cartiaque, on a vérifié que 82,76% possédent un risque moyen, 10,30% un risque bas et 3,45% un risque hant et imminent. En analysantle NAPH et le risque cardiaque, on a observé qu'entre les inactifs 84,2% possédent un resque moyen et 5,3% un risque bas, hant et imminent ; qu'entre les modérements actifs 83,3% possédent un risque moyen et 16,7% un risque bas ; qu'entre les actifs 75% présentent un risque moyen et 25% un risque bas. On s'aperçoit que les comportements avu le plus hant degré de risque cardiaque sont liés aux composants activité physique, comportement préventif (3 réponses pour chaque) et relation (1 réonse pour chaque). **Conclusion:** les participants à la recherche sont sujets à une augmentation de la prédisposition au risque cardiaque, avec une tendance à passer du risque moyen au risque élevé et iminent, ayant l'activité physique et les comportements préventifs comme facteurs associés à celle - ci.

Mots - clés : activité physique habitual, risque cardiaque e médecin.

NIVEL DE LA ACTIVIDAD FÍSICA HABITUAL Y DEL RIESGO CARDIACO DE LOS DOCTORES IN THE REGION OF CARIRI-CE, EL BRASIL

RESUMEN: Los riesgos a nuestra salud de una forma de vida sedentaria se han convertido en un problema mundial a la salud pública. Este estudio apuntó observar los niveles de el activity(físico habitual LHPA), el lifestyle(LS) y risk(CR) cardiaco de doctores en la región de Cariri - CE. Se caracteriza como campo, investigación transversal de la línea, cuantitativa y descriptiva. La muestra fue compuesta por 29 doctores, siendo 17 hombres y 12 mujeres, al azar selección elegida entre las instituciones de la salud en la región de Cariri - Ceará. Los instrumentos usados incluyeron el cuestionario LHPA, lo tradujeron de Russel R. Pate y citado en Nahas (2001) y el control del riesgo cardiaco (modificado de pollock; Wilmore, 1993). Para el análisis de estos datas, el programa SPSS 13.0 fue utilizado. Los resultados habían demostrado ese respeto al LHPA que, 65.5% de los doctores buscados son inactivos, 20.7% moderado activos y 13.8% activos; En lo que concierne a la clasificación cardiaca del riesgo, fue verificado que 82.76% son riesgo cardiaco intermedio, 10.34% es bajo y el 3.45% alto e inminente. Analizar la relación de LHPA y del CR, fue observada entre los inactivos que, 84.2% son riesgo intermedio y 5.3% bajos, altos e inminentes riesgos; Entre los moderado activos, elriesgo bajo 83.3% está el riesgo intermedio y 16.7%; Entre los actives, el 75% habían presentado riesgo intermedio y el 25% riesgo bajo. Uno percibe que los comportamientos con un grado más grande de la asociación al riesgo cardiaco están elogiados en lo referente a los componentes de la actividad física, del comportamiento preventivo (3 respuestas para cada uno), y de las relaciones (1 contestación). **Conclusión:** los participantes de la investigación son predisponen a un aumento en el predisposition al riesgo cardiaco, ocurriendo una tendencia en la dirección de intermedio al riesgo alto e inminente, y siendo la actividad física y los

comportamientos preventivos, los factores que son los más asociados a ella.
Palabras claves: actividad física habitual, riesgo cardiaco, doctores.

NIVEIS DE ATIVIDADE FÍSICA HABITUAL (NAFH), ESTILO DE VIDA (EV) E RISCO CARDIACO (RC) DE MÉDICOS NA REGIÃO DO CARIRI-CE, BRASIL

Resumo: Os riscos à saúde de um estilo de vida sedentário têm se tornado um problema de saúde pública mundial. O **objetivo** deste estudo é verificar os níveis de atividade física habitual (NAFH), Estilo de Vida (EV) e risco cardíaco (RC) em médicos da região do Cariri - CE. A pesquisa caracterizou-se como de campo, transversal, quantitativa e de caráter descritivo. A amostra foi composta por 29 médicos, selecionados aleatoriamente. Os instrumentos utilizados foram o Questionário NAFH e Estilo de Vida (NAHAS, 2001) e o Controle de Risco Cardíaco (modificado de Pollock; Wilmore, 1993). Para análise dos dados foi utilizado o programa SPSS 13.0. Os resultados demonstram que em relação ao NAFH 65,5% dos médicos pesquisados encontram-se inativos 20,7% moderadamente ativos e 13,8% ativos.Quanto à classificação do risco cardíaco, verificou-se que 82,76% possuem risco médio, 10,34% baixo e 3,45% alto e iminente. Analisando a prevalência do NAFH e risco cardíaco, observou-se que entre os inativos, 84,2% possuem risco médio e 5,3% risco baixo, alto e iminente; entre os moderadamente ativos, 83,3% possuem risco médio e 16,7% risco baixo; entre os ativos, 75% apresentaram risco médio e 25% risco baixo. Percebe-se que os comportamentos com maior grau de associação ao risco cardíaco são os preconizados em relação aos componentes atividade física, comportamento preventivo (3 respostas para cada), e relacionamentos (1 resposta). **Conclusão**: os participantes da pesquisa estão sujeitos a um aumento na predisposição ao risco cardíaco, ocorrendo uma tendência no sentido risco médio para alto e eminente e sendo a atividade física e os comportamentos preventivos os fatores mais associados a este.
Palavras-chave: atividade física habitual, risco cardíaco, médico.