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ANALYSIS ON ERGONOMICS, BIOMECHANICS, AND ANTHROPOMETRY IN ORGANIZATIONAL COMPETITIVENESS

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ABSTRACT This article analyzes the competitiveness of organizations from an anthropological or anthropocentric point of view. Nowadays, competitiveness is a factor that productive companies take into account from many angles, in this case, from the area of work comfort. Mental and physical health, as well as psychic, is indispensable in the productivity of work groups, without distinguishing nationality, creed or sex. The idea of being competitive within any economic entity, reveals new perspectives. This is how anthropometry, ergonomics and biomechanics give their contribution to this area of administrative economics.

KEYWORDS : . Competitiveness, labor, ergonomics, biomechanics, anthropometry.

INTRODUCTION

The present work analyzes the vital importance for any economic entity, studies on anthropometry, biomechanics and ergonomics, seen as essentially anthropological aspects and their intrinsic relation with the economy of nations.

Never before today, from attempts to study times and movements, to skinerians, and intimidating studies, or modern analyzes of occupational hygiene, have they become so important, since they prove to give positive results to the economic entities that they have implemented them.

However, we would like to emphasize that the approach we raise in this study is the recovery of having the human being at the center, ie that man is the most valuable asset for the economy, and not the other way around.

Therefore, the studies or scientific approaches of ergonomics, biomechanics and anthropometry, are put at the service of labor welfare and not as a pretext for the famous maximization of economic benefits of productive entities, as demonstrated in the economy of Feeding Sanz Uribe, JR; Lopez Fisco, H A; Álvarez Mejía, F; (2008), in his article "Biomechanical analysis of back and arms for the development of portable tools", - it is sought that agricultural activities do not compromise the skeletal muscle functions of two important parts of the shoulder for this activity: The humeral scapula and lumbosacral of the lower back –

This tells us a bit about the level of application in medicine and labor science, to determine better labor stages in economic entities of any kind.

BIOMECHANICAL FACTOR

For Sanz Uribe, J R; Lopez Fisco, H A; Álvarez Mejía, F; (2008). In his article on activities related to the agricultural field "Biomechanical analysis of back and arms for the development of portable tools" perform a study on the lumbar in its operation with a range of -75 to 75 degrees, establishing analysis of Effort of static loads and dynamic frictions in the lumbar and load of shoulders. This, in order to take care of the health of the field workforce in Medellín, Colombia.

Figure 1: Biomechanics and design

Sources:http://industrial-alturasysaludocupacinoal.blogspot.mx

In conclusion, they establish norms for the prevention and use of adequate tools, in addition to the proposal of protocols of use, which is the most important for the good performance of these agricultural field tasks.

According to González-Montesinos, J L; Fernández-Santos, Jd R; (2012). In his work "Origin and evolution of patents and trademarks in sports biomechanics" describe the relationship between patents and studies in sports medicine. –

Today, in Spain, the assessment devices of the biomechanics of sport perspective, are usually research development, both public and private, such as the different Units and Centers of Scientific Research, CEIT Studies Center) and Centers of High Performance (CAR).

The instrumentation, product of the scientific and creative capacity has required, in most cases, a registry that guarantee to the rest of the scientific community and possibilities of exploitation of the inventiveness is realized in Spain and previous request of person the Spanish Office of Patents and Trademarks (OEPM, 2012 – And conclude that –

The creation of new developments and biomechanics of the sport is becoming increasingly numerous the different institutions researchers and teachers half of their research and innovation. - Which has an important connotation for the labor field, since its level of application is immediate.

In his work "Head forward: a look from biomechanics and its implications on human body movement", Pinzón Ríos, I D; (2015). It points out that the Forward Head (ChA) is a common postural alteration in the physiotherapeutic evaluation, which is related to the presence of pathologies that affect the functionality of individuals not only in this area of the body, but also influences body alignment General, associated to appropriate ergonomic conditions that favor the erroneous postures –

These studies demonstrate clinically, the presence of diverse pathologies associated to the erroneous cervical position, defining vital information for the labor field and its multiple forms of neurotic and motor physical work.

ANTHROPOMETRY FACTOR

For V. Ramírez, A; (2006). In his work "Anthropometry of the mining worker of the height" in a study carried out in 46% of the more than 6,500 workers of the mining industry of Peru, they find that the adaptation for more than 10,000 years that has had the population mainly indigenous , Which represents 43% of this, has adapted to the heights of more than 3000 msnm.

These conditions establish important anthropometric analyzes of this population worthy of study. This analysis shows important results in the work environment.

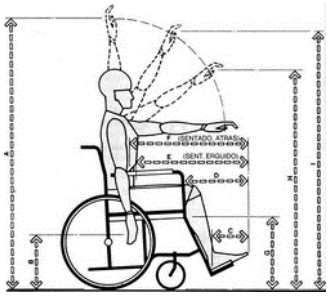

Figure 2: Functional dimensions

Sources: http:// grupo5volumetria.weebly.com

In his article "Anthropometry in the diagnosis of obese patients" by Rosales Ricardo, Y; (2012), there is more globally overweight adults and according to this will reach 3 billion people.

These figures are relevant for the labor field, because under these conditions, the worker has serious difficulties to perform his tasks, having an obvious productive disadvantage for any economic entity.

According to Corvos Hidalgo, A; Corvos Hidalgo, C A; (2014), in his article "Anthropometric indices as predictors of cardiovascular risk in university students", among other things, were found such as: - Cardiovascular disease (CVD) is one of the main causes of mortality and worldwide and is the most frequent reason for hospitalization.

This invites us to think about the need to promote physical activity in the workers of any economic entity, such as preventive programs and protection of the family economies themselves.

ERGONOMICS FACTOR

In his paper on "Ergonomic procedure for the prevention of diseases in the occupational context, Rodríguez Ruiz, Y; Acknowledgments (2014), propose in relation to the work context - work is a fundamental aspect for the stability of families and work that provides a family level; A work in which their rights and opinions are considered and what is expected to be protected when they can not work and in case of occupational diseases and accidents at work – And they conclude – In many cases in the companies are carried out isolated actions and des coordinates in the field of ergonomics and occupational health and safety.

The presented procedure can serve as a reference to the professionals in charge of this field in the companies, since it establishes in steps the activities that must be carried out in an orderly way and with a systemic approach to the success of an ergonomic intervention.

The importance of justifying each project to the people responsible for allocating the resources is stressed, since all efforts would be null if the proposals for improvements are not finally implemented.

Finally, it should be noted that in order to carry out a successful intervention, which is manifested in the improvement of working conditions and the health of the worker, the active participation of all personnel involved in the activities analyzed is necessary.

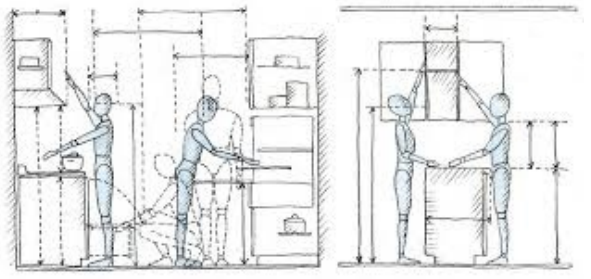

Figure 3: Ergonomics of the restaurant

Sources: http://danipanini.blogspot.mx

In another case study documented by Pérez-Mergarejo, E; Rodríguez-Ruíz, Y; (2011), Production lines have been classified in different ways. The above depends on how you find it organized.

The study of the types of lines of production at different schedules is complex and important, since it affects the decrease of productivity.

Another element that should be considered is the ergonomic design of the posts and the reduction of physical effort and occupational hazards, guaranteeing the adequate monitoring of the increase of the comfort for the accomplishment of its task and the elevation of the productivity. For Piedrahita L., H; (2014), noise pollution is one of the factors that detracts from the work attention - to the presence of several produces an effect of the auditory signals anti-collision system and Trucks (CTD). –

Finally, Márquez Gómez, M; (2012), emphasize the positive evolution in relation to the studies on ergonomic work, from Taylor to our days.

CONCLUSIONS

Performance metrics are elements that inform the system, whatever it is, of the state that keeps the achievement of objectives outlined in a plan, which is deployed in the form of project execution, definitions of success or failure, are given by the Standards managed in the conglomerate of the systems that are measured, In relation to the subjects of ergonomics, biomechanical engineering and anthropo metric studies, it is clear that scientific advances have been made in fields such as sports medicine, educational field and, of course, the workplace.

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