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SHRM from an Anthropometric Perspective: A Case Study of Chennai Coir Industry

C.Balakrishnan

Assistant Professor, Faculty of Management Studies,
baluzonein@gmail.com, 9841199624
Dr. M.G.R. Educational and Research Institute University

Dr.M.Radhikaashree

Associate Professor, Faculty of Management Studies,
rathihagayathri@yahoo.com, 9952052994
Dr. M.G.R. Educational and Research Institute University

B.Suchithra

Assistant Professor, Faculty of Management Studies,
Dr. M.G.R. Educational and Research Institute University

S. Hannah Rajini

Assistant Professor, Faculty of Management Studies,
Dr. M.G.R. Educational and Research Institute University

SHRM-AN INTRODUCTION

Not long ago, unilever was still an American company, LG was Korean and Sony was Japanese. Many American firms such as Coca-Cola, Procter & Gamble, and IBM do most of their business, employ most of their business, and employ most of their workers outside the U.S. many non-Indian companies make products here such as Nissan China making their cars in Chennai. The changes in the business environment with increasing globalization, changing demographics of the workforce, increased focus on profitability through growth, technological changes, intellectual capital and the never-ending changes that organizations are undergoing have led to increased importance of managing human resources. In this scenario, a human resource department that is administrative and lacks strategic integration fails to provide the

competitive advantages needed for survival, thus losing its relevance. Smart companies realized that employees are their bigger assets and their awareness had prompted companies to adopt and executive a strategic approach to the management of people, which needs to be aligned with strategic goals of business.

Thus, the desire for a proactive management of people led to the emergence management of people led to the emergence of a new field, Strategic human resource management (SHRM) which is a branch of the parent discipline human resource management (HRM). Hence, SHRM can be defined as the linking of human resources with strategic goals and objectives in order to improve business performance and develop organizational culture that foster innovation, flexibility and competitive advantage. In an organization, SHRM means accepting and involving the HR function as strategies through HR activities such as recruiting, selecting, training and rewarding personnel.

ANTHROPOMETRY AND ITS RELEVANCE

As for companies, proper management of employees leads to decreased absenteeism and higher productivity, which can have a profound impact on the bottom line. A new corporate culture has to be instigated that values the discipline anthropometry and its long-term effects. Anthropometry and its long-term effects. Anthropometry is a branch of anthropology Concerned with comparative measurements of the human body and its parts. The term anthropometry derives from two Greeks words: anthropos meaning human, and metrikos, meaning measuring, to create a word, which deals with the human body measurements, that refers to body size, strength, shape and work capacity. It is used to assess and predict performance, health and survival of individuals and reflect the economic and social well being of populations. It is important in work and reflects the economic and social well being of individuals and reflect the economic and social well being of populations. It is important in work because the dimensions of the human body affect capabilities of worker and are essential in designing his workplace. The studies indicate that not only total body fat, but also regional fat and skeletal muscle, can be predicted from anthropometrics. Wang, J.C.Thornton, S.Kolesnik, R.N.Pierson Jr. (2006). Many of the reported occupational problems were caused or exacerbated by a work environment that did not fit its ouccupants Botha and Bridger (1998).

Methods of measuring anthropometry

There are two methods of measuring anthropometry.

1. Static (structural). These include measurements taken while the body is in a static position.
2. Dynamic (functional). These include measurements taken while the body is engaged in some kind of activity.

The Building Blocks of Anthropometry Parameters

Anthropometry can be used for various purposes, depending on the anthropometric parameters selected. Anthropometric data are used to design workspace, safety equipment and personal workspaces, safety equipment and personal protection tools considering the differences between the characteristics, abilities, and physical limits of any particular human body. In our study, it is used to measure the workers capability during their work hours and the consequential performance and productivity. The Five Building Blocks or Parameters used to undertake anthropometric assessment are:

- Body posture
- Body movements
- Physical strain (such as backache, chest , ache, shoulder pain)
- Rest pause
- Replenish the fluid loss

Each of these variables provides one piece of information about a person. When they are used together, they can provide important information about a person's occupational status. Today, anthropometry plays an important role in industrial design, clothing design, and ergonomics and architecture where statistical data about the distribution of body dimensions (e.g. the obesity epidemic), and require regular updating of anthropometric data collections.

1. Research Methodology

1.1 Rationale for the study

Industries that are engaged in nationwide acceptable & indigenous products manufacturing sector are in the ailing stage due to a stringent and non-susceptible treatment from the industrialists. The non-availability of pro-industry reformist had accentuated its trail. Coir industry is one such area, which needs the growing concern. The product is under the close heels of the people since time immemorial. The nation is generating unquestionable amount of foreign earnings in terms of exports also. But are we doing justice to the hapless survivors who are serving as the backbone of the industry?

The users, usage, and usage of coir products persist in the market until an alternative product evolves to transcend its importance. So the situation seeks the urgency of a total revamp of the traditional man-machine interaction. The employees are environment and out dated equipments. As a sequel to this, the roles donned by the employer as an autocrat is in no way roots the conflicts between the human needs & technology. The system must be designed to best consider the various strength and limitation of the human system. In doing so, it should consider the following:

(i) Mechanism of the human system

(ii) Anatomical & anthropometrical aspect of the human body.
(iii) The potential psychological and physiology effects of wrong conditions.

1.2 Objectives of the study

1) To review the measures taken by the coir industrial units in Chennai in supporting anthropometric factors.
2) To compare and contrast the anthropometric measures adopted in the size of units as well as in terms of the sector in which it operates (public, private, sector and co-operative society)

1.3 Source of Data

The major source of data was primary data collected from the employees of coir industrial sectors namely public, private and co-operative societies. The sectors are further trifurcated into upper, Middle and lower based on their initial investments.

1.4 Sample Frame

Data was collected from the three sectors in the coir industry, public, private and cooperative societies .Each Sector is trifurcated into three categories, upper, middle and lower based on their initial investments. Firms with investment above 25 lakhs brought under the purview of upper level followed by middle level with investment ranges from 15-25 lakhs and lower level ranges from 5-15 lakhs. It is observed that out of the 50 respondents in the private sector9 belonged to the upper, 23 in the middle and 18 in the lower category. Only 3 firms represents the public sector with 2 under the category of upper, 1 in the lower and none at the middle level. Among the 25 cooperative societies surveyed, majority comes under the belt of lower level i.e. 21 while 3 in the middle and only 1 in the upper category.

1.5 Analysis Design

Mean, Percentage, ranking tables and Spearman's Correlation analysis are used for analyzing the data. Exploratory Factor analysis is performed on the pilot data to understand the structure underlying the factors and parameters of Human engineering. The factor structure thus emerging was verified with a confirmatory factor analysis on the final data. SPSS11.0 is the statistical package under for data editing, coding and basic analysis.

Analysis and Results

As mentioned earlier anthropometry is comprised of a set of parameters such as

- Body postures

- Body Movements
- Physical strain (such as backache, Chest, ache, shoulder pain)
- Rest Pause
- Replenish the fluid loss

Each parameter is measured on statement for agreement format using Likert's 4 point scale with weighs of 5,4,3,2 assigned to strongly agree (SA), agree (A), disagree (D), Strongly disagree (SD) respectively. Mean value (MV) of each factor is computed separately and compared with the mid value 3.5 to know the extent of agreement. Overall, mean value (OMV) of each factor is compared with the cutoff rate 3.5 to know the overall degree of agreement.

1. PRIVATE SECTOR

Private sector was trifurcated into three levels, upper, middle and lower based on the initial investment.

1.1 PRIVATE – UPPER LEVEL.

Anthropometric parameters

It is observed that body postures show the highest degree of agreement with value 4.1 Followed by body movements and replenishing the fluid loss with value 4, rest pause with Value 3.8. Lowest mean value is obtained for physical strains with value 3.5 equaling the MV 3.5. Since OMV 3.8 is above than the MV 3.5, it is inferred that workstations are designed to suit the anthropometric parameters of employees.

1.2 PRIVATE – MIDDLE LEVEL

Anthropometric Parameters

It is observed that body postures and body movements show the highest degree of agreement with value 4, followed by the rest pause and replenishing the fluid loss show the highest degree of agreement with the value 4.1, followed by the body posture with value4. Lowest mean value is obtained for Physical strains with value 3.6, which is above than the MV 3.5, it is inferred that workstations are designed to suit the anthropometric parameters of employees.

1.3 PRIVATE – LOWER LEVEL.

Anthropometric parameters

It is observed that body movements and the replenishing the fluid loss show the highest degree of agreement with value4.1, followed by the body posture with the value 4. Lowest mean value is obtained for physical strains with value 3.8, which is

above than the MV 3.5. Since OMV 4 is above than the MV 3.5, it is inferred that workstations are designed to suit the anthropometric parameters of employees.

2. PUBLIC SECTOR:

Public sector was bifurcated into two levels, upper and lower based on the investment.

2.1 PUBLIC-UPPER LEVEL.

Anthropometric parameters

It is observed that body postures and body movements show the highest degree of agreement with the value 4, followed by the rest pause and replenishing the fluid loss with value 3.5. Lowest mean value is obtained for physical Strains with value 3. Since OMV 3.6 is above than the MV 3.5, it is inferred that workstations are designed to suit the anthropometric parameters of employees.

2.2 PUBLIC-LOWER

Anthropometric Parameters

It is observed that body postures, body movements, the rest pause and replenishing the the fluid loss shows with value 4. Lowest mean value is obtained for the physical strains with value 3, which is below than the MV 3.5.

Since OMV 3.8 is above than the MV 3.5, it is inferred that workstations are designed to suit the anthropometric parameters of employees.

3. CO-OPERATIVE SOCIETY

Society was trifurcated into three levels, upper, middle and lower based on the initial investment.

3.1 SOCIETY- UPPER LEVEL

Anthropometric Parameters

It is observed that all the parameters show the same value 4. Since OMV 3.8 is above than the MV 3.5, it is inferred that workstations are designed to suit the anthropometric parameters of employees.

3.2 SOCIETY-MIDDLE LEVEL

Anthropometric Parameters

It is observed that rest pause shows the highest degree of agreement with value4.3, followed by replenish the fluid loss with value4. Body posture and the body

movement show the value 3.6. Lowest mean value is obtained for physical strains with value 2.6, which is below than the MV 3.5.

Since OMV 3.6 is above the MV 3.5.it is inferred that workstations are designed to suit the anthropometric parameters of employees.

3.3 SOCIETY –LOWER LEVEL

Anthropometric parameters

It is observed that the rest pause show the highest degree of agreement with value 4, followed by and replenishing the fluid loss with value3.9. Body postures with value 3.7 and the body movement's value with 3.5. Lowest mean value is obtained for physical strains with value 3.1 which is above than the MV 3.5.

Since OMV 3.6 is above than the MV 3.5, it is inferred that workstations are designed to suit the anthropometric parameters of employees. Comparatives study on anthropometric measures at public, private and co-operative society level. This section presents the results of comparison between coir industrial units in the state in terms of level of management. Deviation from the mean value for each factor are computed separately at two levels. Spearman's rank correlation coefficient (?) is used to measure the statistical dependence between two variables.

1. COMPARATIVE STUDY OF COIR INDUSTRY BETWEEN UPPER PUBLIC UPPER PRIVATE LEVEL

Anthropometric Parameters

Comparative study is undertaken between the public and private sector. It was observed that there was very high degree of association on all the anthropometric parameters except body movements and fluid loss where the deviation was up to 1. Spearman's correlation of 0.865 between the public and private sector on anthropometric parameters at the upper level.

2. COMPARATIVE STUDY OF COIR INDUSTRY BETWEEN LOWER PUBLIC-LOWER PRIVATE LEVEL

Anthropometric parameters

It was observed that there was very high degree of association on all the anthropometric factors except Body Posture, Body Movements, Physical Strain and Fluid loss where the deviation was up to 1.

Spearman's correlation analysis revealed that there is high degree of correlation of 0.745 between the public and private sector at the lower level on anthropometric.

3. **COMPARATIVE STUDY OF COIR INDUSTRY BETWEEN UPPER PUBLIC UPPER SOCIETIES LEVEL.**

Anthropometric Parameters

It was observed that there was very high degree of association on all the anthropometric factors except Body Posture, Body Movements, Rest Pause and Fluid Loss where the deviation was up to 1.

Spearman's Correlation analysis revealed that there is high degree of correlation of 0.745 between the public sector and cooperative societies at the upper level on anthropometric.

4. COMPARATIVE STUDY OF COIR INDUSTRY BETWEEN LOWER PUBLIC-LOWER SOCIETIES LEVEL

Anthropometric Parameters

It was observed that there was very high degree of association on all the anthropometric factors except body movements and rest pause where the deviation was up to 1.5

Spearman's Correlation analysis revealed that there is high degree of correlation of 0.707 between the public sector and societies at the lower level on anthropometric.

5. **COMPARATIVE STUDY OF COIR INDUSTRY BETWEEN UPPER PRIVATE – UPPER SOCIETIES LEVEL**.

Anthropometric parameters

It was observed that there was very high degree of association on all the anthropometric factors except body posture, body movements and rest pause where deviation was up to 1.5.

Spearman's Correlation analysis revealed that there is high degree of correlation of 0.725 between the private sector and societies at the upper level on anthropometric.

6. COMPARATIVE STUDY OF COIR INDUSTRY BETWEEN MIDDLE PRIVATE – MIDDLE SOCIETIES LEVEL.

Anthropometric parameters

It was observed that there was very high degree of association on all the anthropometric factors except rest pause where the deviation was up to 2.5.

Spearman's Correlation analysis revealed that there is low degree of correlation of .108 between the private sector and societies at the middle level on anthropometric.

7. COMPARATIVE STUDY OF COIR INDUSTRY BETWEEN LOWER PRIVATE – LOWER SOCIETIES LEVEL

Anthropometric parameters

It was observed that there was very high degree of association on all the anthropometric factors except body movements and rest pause where the deviation was up to 2.5.

Spearman's Correlation analysis revealed that there is low degree of correlation of .316 between the private sector and societies at the lower level on anthropometric.

Conclusion

The Failure of linking of HRM with strategic goals and objectives is a common problem reported from organizations across the globe. Many of the business stalwarts may have failed due to a lack of understanding of the physical dimensions and mechanism present in the human system.

Experts in the area have claimed that the indices associated with anthropometry must be identified and managed in order to improve business performance and develop organizational cultures that foster innovation, flexibility, enhance productivity etc.

The major objectives of the study was to obtain a better understanding of the discipline anthropometry by identifying the parameters that characterize it and link these constructs to be formulation of an HR systems that produce employee competencies and behaviors which the company needs to achieve its strategic aims.

Until now, there has been little empirical research, especially in India, Investigating these constructs in the framework of business outcome. This Study tries to provide insights in this context. After the analysis of data, the study generated some valuable information with regard to these constructs and their inter-linkages.

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