BIORHYTHM FOR HR IN SAFETY MANAGEMENT

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Abstract

 Human Resource Management (HRM) is a subsystem in the organization context but a system in its own context. One of the basic operational function of HRM is occupational safety and health (OSH).

It has emerged that HR has to move to another step in the area of safety and accident prevention, because of the increasing number of deaths and accidents at work. Though HR professionals are not expected to understand all the technical aspects of safety, they can play an important role in administrating, communicating, facilitating and championing the safety management.

As safety management is concerned with reducing accidents and controlling or eliminating hazards at the work place, accident prevention is a significant step towards safety improvement [8].

Presently safety programs emphasize on elimination of unsafe conditions at work. Yet, it was recognized by Henrich that 88% of all accidents are caused by the unsafe acts of people [1]. Errors made by the humans at work are often known as unsafe acts. An error in the human performance leads to accidents.

One of the key factors of performance improvement in safety management and accident prevention is to develop safety awareness.

Through this study the biorhythms model is tested and used as HR tool to determine lows in human performance. The HR professionals by using biorhythms can then reinforce "safety consciousness" at specified times to individuals at work for preventing accidents.

Key words : Biorhythms, HR, Prevention, Accidents, Awareness.

Background :

        The world of work is changing. This change influence on the both human resources and their management. In this context area of safety and accident prevention is of great concern not only for the safety professionals but also to HR professionals because of the stringent safety regulations which impose major fines and even criminal conviction in the event of accidents at work.

        Can the old strategies and structures of accident prevention cope with the newly emerging risks? Traditional methods of accident prevention and safety management to reduce human errors at work have relied on educational programs, safety training, engineering control, verbal communication and enforcement. Even then safety records have not improved. It is because traditional approach assumes a constant

level of human performance. Whereas, the human performance is variable and dynamic.

Hence, if emphasis can be placed on safety during low periods of human performance, this awareness itself may contribute to accident prevention.

Identifying all of the primary causes which influence performance at work is difficult and complex task because no single factor alone can be a perfect predictor of the human performance susceptibility towards making errors.

Biorhythms provides a potential HR management tool to aid in better decision making by considering the periods when a worker may be most susceptible to errors[10].

The objective and aim of the present study was to construct a more holistic model of biorhythms for accident prevention and safety management.

What is Biorhythms?

The word "Biorhythms" is derived from the Greek words, bios, meaning life, and rhythmos, meaning a regulated beat. The Biorhythms theory states that at the moment of birth, three cycles are initiated and recur consistently throughout Persons life. The three cycles have independent durations and influence the physical, emotional and intellectual states of the individual. Specific points in the cycle correspond to highs and lows in human performance. Biorhythms Predicts human performance by mean of understanding biological rhythms in human beings. [9].

Dr. Herman Swoboda (1873-1963) developed a mathematical analysis of the 23 days physical and 28 days emotional cycle in man. Alfred Teltscher found 33 day intellectual cycle [2] [3].

In any of three physical, emotional and intellectual cycles, the positive period is thought to represent the high performance interval and negative period is thought to represent a low performance phase.

When one's energy changes from the high phase to low phase or vise versa, these days called "critical days". Where, body's system is not stable. This instability does not in itself cause accidents, but does have a mild negative influence on an individual, Which may increase the probability of an accident occurrence. This mild negative influence an individual may compensate by being aware at that period of time [3] [7].

So, biorhythm predictions may be very effective in motivating us to do the things we supposed to do.

Methods

The individual biorhythm calculation at any given time requires the date being investigated (here in present study date of accident). The age of person from the date of birth up to and including accident date needs to be determined. (i.e. date of birth of the person involved in the accident) [6].

Biorhythm analysis can be done by using readily available computation program on the internet.

Data collection

In the case of present study two different data sources were selected. One is IB automation company Pune where, from HR department date of birth for 286 people on roll was collected. Injury log of recorded incidences during 1st May 2016 to 31st Oct. 2017 is then observed.

Another data has been collected from Govt. ITI Latur from which data of 110 people on roll was collected. Injury log from 1st August 2016 to 31 Dec 2016 is then observed. Analysis for present study is carried out for this sample.

Analysis procedure

With the readily available software program on internet for computation of biorhythm cycles was used for data analysis.

Collected data was analyzed only for those accident cases [5] [6]. Where following requirements will comply:

1) That it was an accident
2) That it was a single source accident
3) That the victims birth date is accurate
4) That the accident date is correct.

In a sample of 110 cases studied from Govt. ITI Latur, 44 injuries occurred on biorhythm critical days. To find relationship between injury occurrence and biorhythm criticality with a 95% confidence level. A statistical technique chi-square goodness of fit test with student 't' distribution was adopted [3] [4].

Results

After analyzing data statistically it was found that in the sample observed for 110 cases from Govt. ITI Latur, calculated $0.31701 > \mu > 0.30117$, μ value does not lies within the sample 95% confidence interval, therefore a relationship between accident occurrence and biorhythm critical days has been established. Hence, null hypothesis: the accidents recorded on biorhythm critical days could have fallen on those days purely by chance may be rejected.

Conclusion

The results of the investigation, evaluations and testing involved in this study imply that approximately 40% of the accidents occur on accident prone days calculated according to biorhythms.

1) It is concluded that 40% of the time accidents do coincide with accident prone days or critical days as specified according to biorhythm theory.
2) It is concluded that uniformity in use of data is a requirement of biorhythm analysis.
3) It is concluded that 40% of the accidents occurring on accident prone days would indicate a successful amount of accident predictability through biorhythm evaluation.

4

Research to practice

Biorhythm theory may be applied by HR to reduce frequency of industrial accidents by informing employees of their biorhythms.

When employees are aware of their lows according to their biorhythms, they may exert extra cautions to prevent possible individual errors. Employees may be provided with biorhythm tables and supervisors may be informed on a daily basis of the accident prone days for the employees in their department, and in turn personally inform workers to exert appropriate caution.

 The essence of biorhythm for HR management is establishing a set of procedures by which the biorhythmic accident prone periods of each individual at work may be considered and compensated for on an individual basis. Through this procedure the likelihood of worker- performance types of accidents may be minimized.

Limitations of the present study

1) Biorhythm alone cannot be a safety solution but it can be used along with other prevention strategies.

2) Time of birth is not considered in present study but it is essential for providing the most accurate representation of a biorhythm cycle.

3) The use of biorhythm could improve safety awareness by virtue of the "Hawthorne Effect". The Hawthorne effect refers to any situation where the employee knows he is getting special attention.

4) Biorhythms are common to all individuals.

5) Only 110 cases collected from Govt. ITI was analyzed in the present study.

Summary

R. K. Anderson says biorhythm is strictly a tool, a diagnostic tool. It will not predict that you are going to have an accident. This is strictly a means of helping you overcome the biological stresses you are subject to[5].

The present study concludes on the same line, and proposing biorhythm as a HR tool for an accident prevention program.

There are many approaches to behavioral safety but the ultimate objective of all the approaches is to improve safety.

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