



EFFECTIVENESS OF STRATEGIES TO REDUCE ABSENTEEISM DUE TO MUSCULOSKELETAL DISORDERS IN A PHILANTHROPIC HOSPITAL

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Abstract

Musculoskeletal disorders are an important reason for absenteeism in Brazil, including among workers in hospital environments. Within this panorama, there is regulatory norm 17 (NR 17) which aims to guarantee safe and healthy work, and can be used as part of strategies to reduce absenteeism. Therefore, the objective of this study was to verify the result of strategies applied in a philanthropic hospital aiming at reducing absenteeism due to musculoskeletal disorders, through the role of ergonomics with the ergonomist participating in the improvements with the sectors. Faced with these concept mentions, the Desenvolvimento Humano Organizacional (DHO) and Saúde Ocupacional sector of the Hospital Dos Fornecedores de Cana De Piracicaba (HFC Saúde), which used data collection as a methodology, interpretation of and these after understanding that the highest rate of removal of his collaborators was due to the ICD M of musculoskeletal diseases. A fact that used strategies and interventions resulting from these, such as the use of NR 17, formation of the Ergonomics Committee (COERGO), use of the MAPHO ergonomic tool in a management format and the management of all certificates with ICD (International Disease Code) M, delivered to the Occupational Health sector between the years 2016 to 2021. Through this methodology, it was possible to clearly verify the decrease in absenteeism, given that in this period the only significant changes that occurred within the institution were the strategies mentioned, coinciding chronologically with the applications in each area and, consequently, their direct cost, showing that the recommendation to develop strategies based on data verification aimed at reducing absenteeism, brought a positive impact on the health of employees and organizational performance, highlighting the need for this hospital to use strategies to obtain positive results for both the company and the workers.

Keywords: Absenteeism, ergonomics, management, hospital and MAPHO.

1. INTRODUCTION

Musculoskeletal disorders are an important reason for absenteeism, reaching around 27 million Brazilians at work (Ferreira, 2012). Within this panorama, it is evident that the multiple workload that exists in hospital functions, especially nursing, can be considered an important source of illness for workers, a fact that directly reflects on the absence of the employee on their

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shifts (Kuranth, 2021). This phenomenon is known as absenteeism due to illness, and is one of the biggest problems related to human resource management in hospitals (Marques, 2015).

According to Betiol & Tonelli (2003), absenteeism can also be correlated with other factors, such as work organization, working conditions (these are also linked to psycho-affective anxiety) and number of employees in the functions (this can not only cause physical exhaustion but also lead to discouragement, lack of commitment, in addition to the occurrence of other diseases), and such factors are not necessarily linked to disorders of the musculoskeletal system.

A study carried out in a public hospital in São Paulo, with a sample of a period of three years, identified that the largest number of cases involving illness among employees was due to diseases of the musculoskeletal system and connective tissue (Rocha, 2019). Another study also in a hospital environment carried out in the south of the country with a capacity of 50 beds, pointed out that in a period of five years, there were 2,403 absences of more than fifteen days. Of this total, most were due to musculoskeletal disorders, representing about 23%, and the remaining leaves were related to clinical disorders, psychiatric cases, surgical or unknown. Thus, it is suggested to develop strategies to reduce absenteeism, focusing on the health of workers and consequently causing a positive impact on organizational performance (Kuranth, 2021).

According to Couto (2014), ergonomics can be defined as interprofessional work, which, based on a set of sciences and technologies, seeks mutual adjustment between human beings and their work environment in a comfortable, productive and safe way, fundamentally seeking to adapt work to the worker.

Parallel to this definition, there is regulatory standard number 17 – Ergonomics¹ (NR 17), among other standards incorporated into Brazilian legislation, which consists of attributions, rights and duties to be fulfilled by employers and workers, with the objective of ensuring safe and healthy work. This standard establishes guidelines and requirements that allow the adaptation of working conditions to the psychophysiological characteristics of workers, in order to provide comfort, safety, health and efficient performance at work. Included in the working conditions are aspects related to lifting, transporting and unloading materials, the furniture of the workstations, working with machines, equipment and hand tools, as well as the conditions of comfort in the work environment and the organization itself. Rule that is updated in view of Ordinance/MTP No. 423 of October 7, 2021, effective on January 3, 2022.



Marques et al. (2011) reinforce that after verifying data such as the period of leave, change of sector, gender, age and other medical documents, it is possible to reduce absenteeism and improve the quality of life of workers, which can be proven with the reduction of damage, when prevention programs such as risk reduction, ergonomic corrections and others are implemented. being significant for the improvement of the worker's health and the company's productivity.

Junior (2017) states that it is not difficult to see that every absence of a worker, regardless of the reason, reflects in costs for the company, where, however, in order to solve the problem, many organizations adopt various programs for this purpose.

Pizo & Menegon (2010) state that research and actions are effective when carried out, with regard to the relationship between man and work (ergonomics), taking into account the health of the worker and economic effectiveness.

Moura et al. (2020) report:

"One of the contemporary challenges of Ergonomics in companies is to convert the results of the application of Ergonomic Analysis (AET) into projects that will actually be implemented systematically in organizations. Ergonomic action is, therefore, one of the main obstacles in organizations. In this scenario, the Ergonomics Committee (CoErgo) emerges as an important vector of Ergonomics in organizations, as it facilitates systematized and organized actions within organizations."

Fakih et al. (2006) mention that, especially in hospital environments, nursing plays a fundamental role in care, so it is notorious that this population represents a significant portion of the staff in these establishments. However, these employees are fractionated in several sectors, not causing specific attention, but in the aggregate it has a great impact. And, according to Menoni et al. (2015), these professionals, both nationally and internationally, fall into the categories that are most affected by acute and chronic pathologies and disorders of the musculoskeletal system, linked to the manual movement of patients. According to Mauro et al. (2010), identifying causes of illness is the first step towards a prevention strategy and, consequently, a reduction in absenteeism.

Therefore, the objective of this study was to verify the result of strategies applied in a philanthropic hospital aiming to reduce absenteeism due to musculoskeletal disorders, through the protagonism of ergonomics with the ergonomist participating in improvements in management and processes, such as acquisition and replacement of equipment, adequacy of workstations, training and monitoring of absenteeism with the Organizational Human Development (DHO) and Occupational Health sectors.



2. METHODOLOGY

Scaratti & Calvo (2012) assert that transforming the concept of indicators or information standards contributes considerably to evaluative studies, applying quality management, which allows the identification of possibilities for improvements in performance.

Taking this concept into account and understanding that, historically, year after year evaluating the indicators of the occupational health sector of the Hospital dos Fornecedores de Cana, a philanthropic hospital with approximately 1200 CLT employees, the highest rate of employee leave that caused a direct impact on the company's absenteeism was due to the ICD "M" (diseases of the musculoskeletal system and connective tissue). After collecting data with the Organizational Human Development (DHO) sector, considering the financial impacts as a result of this fact, reflections and discussions were carried out on the possibilities of strategies, in order to reduce these numbers and generate benefits for society in general (employee, company, people in direct contact and public pension). Thus, in the second half of 2016, the movement in the DHO of HFC Saúde began and actions listed below began to be taken:

- 1- Verification of the sector with the highest rate of medical certificates (ATM), involving the ICD M, observation of the Ergonomic Work Analysis (AET) of all the functions of the hospital complex and the crossing of this information with the rates of medical certificates (ATM). In this way, the sector that became the focus of AET's reviews was chosen, after contemplating the ergonomic recommendations carried out during the year and later, and the execution of fine improvements.
- 2- Establishment of the ergonomics committee (COERGO), with the participation of the ergonomist and members of the Legal, Occupational Health, Occupational Safety, DHO, Engineering sectors and guests from the areas involved, to assist in the identification and execution of the management of ergonomic recommendations.
- 3- Improvement course for the ergonomist, on the ergonomic tool MAPHO (Adequate Movement of Hospitalized Patients) which meets ISO TR/12296:2012 and beginning of risk management in the movement of patients within HFC Saúde (creation of protocol, standards and routines, standardization and acquisition of equipment for transporting and accommodating patients – wheelchairs, shower chairs, stretchers and beds, evaluation of exposure rates, acquisition of patient movement equipment such as human crane, sliding sheets, rotating discs and



patient transfer belts and MAPHO training. This tool chosen to be used in AET's is classified as an internationally recognized method for a global, analytical and parametric risk assessment, aimed at an integrated assessment and management of the risk linked to patient movement activities in health facilities (Menoni, 2015).

- 4- Attendance, monitoring and guidance of all employees who have TMJ with ICD M, through an anamnesis, employee report, adequacy in tasks or workstation if necessary and degree of satisfaction with this service.

3. FINDINGS

Given that in the mentioned period there were no significant changes within the hospital involving factors of management, work organization, working conditions except those mentioned in items 1, 2, 3 and 4 in methodology, nor changes in the number of employees and strategic actions aimed at reducing absenteeism due to musculoskeletal disorders, it was possible to make a chronological comparison using the same methodology in data collection. The data below can be observed in figures, identifying in the timeline, actions taken, general numbers and areas where there were specific interventions.

It can be seen in FIGURES 2 and 5 that MAPHO actions started before or only before Ergonomics (analysis and application of the current recommendations of the year of the AET) in the clinical nursing sectors, having as one of the reasons the size and size of the hospital. That is why this ergonomic tool, which like others are part of the AET, was used beforehand in the management format in order to ensure the speed of the improvements made to it.

In FIGURE 1, it is possible to see the gradual drop in the total number of certificates in the historical series of TMJs with ICD M delivered to the Occupational Health of HFC Saúde, with 264 certificates in 2016, the year in which until then no strategy had occurred, and in 2021 there were only 120 certificates delivered.



Figure 1. Graph representing the total number of certificates in the historical series of ATMs with ICD M delivered to the Occupational Health of HFC Saúde. *Indicates the year of start of the applied strategy.

Figure 2 shows the number of certificates in the historical series of TMJ with ICD M, specific by clinical nursing sectors, delivered in the Occupational Health of HFC Saúde. It is possible to observe the gradual drop, with 11 certificates being presented in 2016 and in 2021 only 63 certificates were presented, a reduction of approximately 44%.



Figure 2. Graph representing the number of certificates in the historical series of TMJ with ICD M, specific by clinical nursing sectors, delivered to the Occupational Health of HFC Saúde. *Indicates the year of start of the applied strategy.

In the graph in FIGURE 3, the TMJs with ICD M of the Nutrition delivered sector of the Occupational Health sector of HFC Saúde were filtered with a peak of delivery in 2017, the year in which ergonomic interventions in the sector began and later it is possible to verify the reduction in the coming years, with the maintenance of ergonomic improvements.

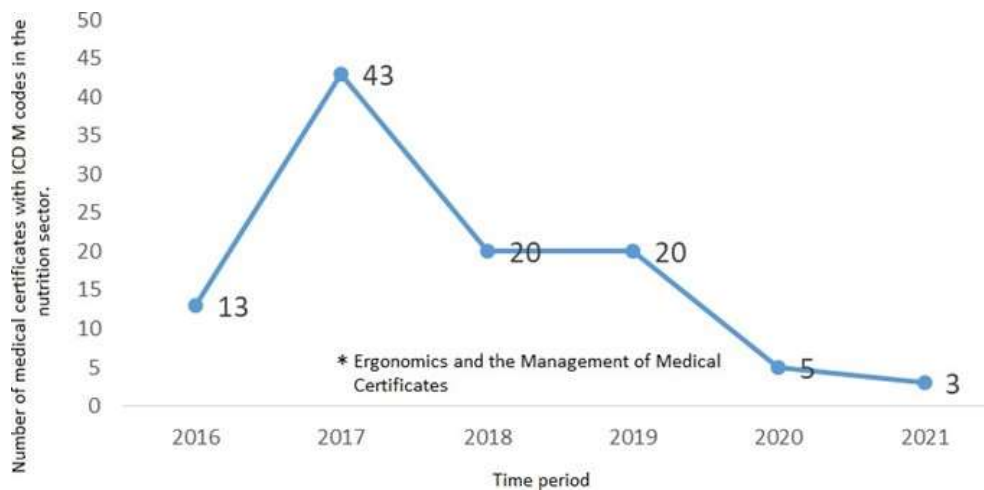


Figure 3. Graph representing the number of ATMs with ICD M in the Nutrition delivered sector of the Occupational Health of HFC Health. *Indicates the year of start of the applied strategy.

In FIGURE 4, the TMJ with ICD M delivered to the Occupational Health of the HFC Health in the Hygiene sector was filtered, showing the beginning of ergonomic interventions in 2018 and the reduction of these numbers in the historical series.



Figure 4. Graph representing the number of ATMs with filtered ICD M from the Sanitation sector.*Indicates the year of start of the applied strategy.

In the graph in FIGURE 5, the TMJ with ICD M delivered to the Occupational Health of the HFC Health in the P.A. sector was filtered, showing the beginning of ergonomic interventions in 2019 and, consequently, the reduction of the numbers in the historical series.

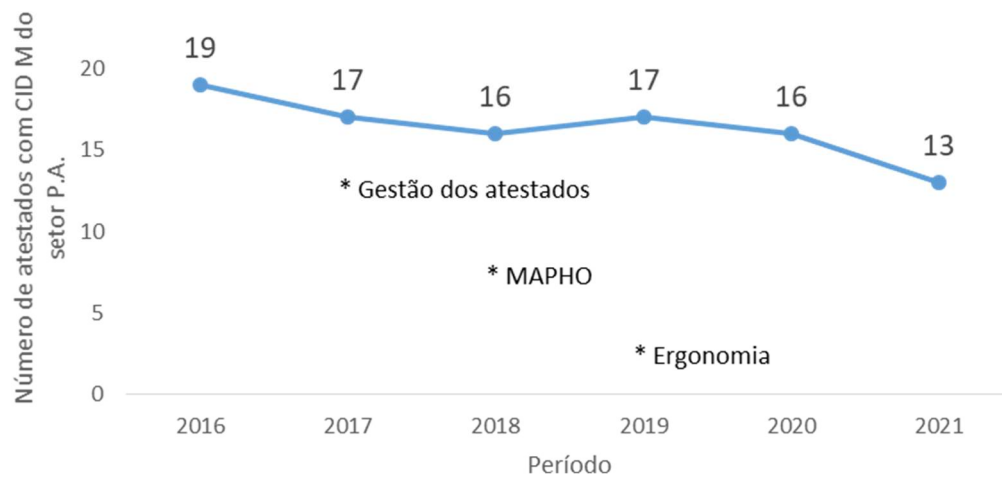


Figure 5. Representative chart of the number of ATMs with filtered ICD M from the P.A. sector

*Indicates the year of start of the applied strategy.

In the graph in FIGURE 6, the TMJ with ICD M delivered to the HFC Occupational Health sector C.C. was filtered, showing the beginning of ergonomic interventions in 2017 and the drop in numbers after the peak from 18 ATM in 2019 to 7 ATM in 2021.

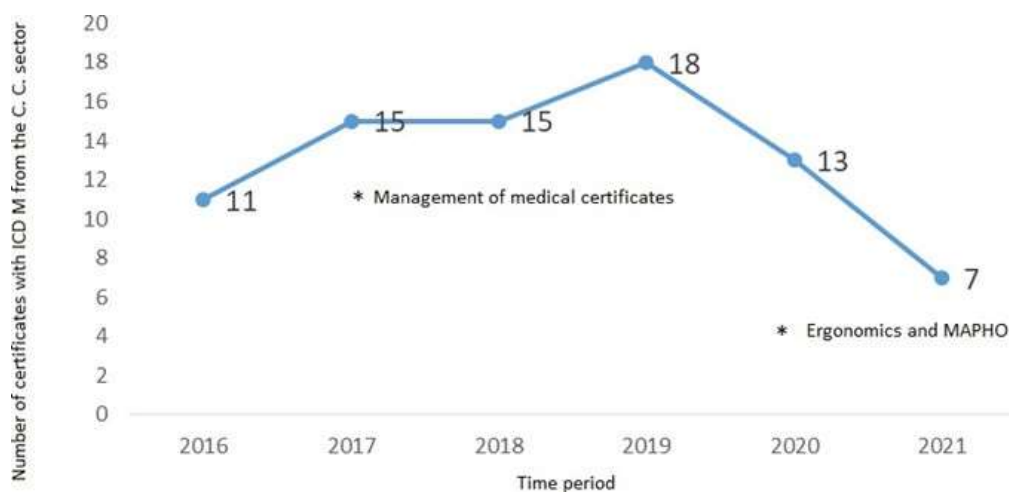


Figure 6. Representative chart of the number of ATMs with filtered CID M from the DC sector

*Indicates the year of start of the applied strategy.

In CHART 1, it is possible to notice the reduction in the number of ATMs with ICD M delivered to the Occupational Health of HFC Saúde, reducing from 264 in 2016 to 120 in 2021 (reduction of 55%). As for absenteeism, it was reduced from 1668 days in 2016 to 357 days in 2021 (79% reduction), representing the same percentage as the direct cost of these, which generated an average saving of R\$ 183,199.86 in the comparison of the years 2016 and 2021

(average cost considering the average value of the day/shift of an employee, using the 2021 cost base for all the years presented).

Table 1: Absenteeism due to medical certificates with ICD M, associated with direct cost

	Year/%											
	2016	%	2017	%	2018	%	2019	%	2020	%	2021	%
Medical certificates	264	-	228	↓ 14	204	↓ 23	168	↓ 36	132	↓ 50	120	↓ 55
Days	1668	-	948	↓ 43	744	↓ 55	652	↓ 49	432	↓ 74	357	↓ 79
Costs	R\$ 233.086,32	-	R\$ 132.473,52	↓ 43	R\$ 103.966,56	↓ 55	R\$ 119.058,48	↓ 49	R\$ 60.367,68	↓ 74	R\$ 49.887,18	↓ 79
Difference in values			R\$ 100.612,80		R\$ 129.119,76		R\$ 114.027,84		R\$ 172.718,64		R\$ 183.199,14	

Table 1. Table showing the number of certificates with ICD M delivered to the Occupational Health of HFC Saúde, along with the days of absenteeism, direct cost value and percentage differences for 2016.

4. DISCUSSION

In view of the results and aware that within the mentioned period the only significant changes that occurred within this philanthropic institution were the strategies mentioned in the methodology, it is evident the positive impact of these for the reduction of absenteeism due to TMJ with ICD M, and it can be proven that after applying all the strategies recommended for such areas, the absenteeism rates began to decrease, showing that the recommendation to develop strategies based on data verification aimed at reducing absenteeism has a positive impact on employee health and organizational performance, as mentioned above.

In all sectors or areas scored, a reduction in these indices was identified, and it was possible to verify areas with a longer sample time and others with a shorter period, as in the case of sector C.C. where the intervention and sample time was only one year, however it showed a reduction of 46% in the index. In the aggregate, the reduction in absenteeism was 79%. Linking financial aspects, the reduction in the annual cost of absenteeism (ICD M), based on the average daily cost of the employee in 2021, also for the year 2016 was R\$ 183,199.86.

In this work, the costs resulting from bank of hours, overtime, cost of increasing the number of employees to adjust the sizing, turnover and costs with claims with health services were not measured. Amounts that were also not considered are those resulting from labor liabilities that are difficult to measure and can fluctuate drastically from one lawsuit to another, but cause a financial impact.

More than financial values, organizational aspects that positively impact the appreciation of the environment and the relationship with work must be taken into account. It should be taken into account the fact that the absence of too many workers reflects a direct impact on the activities of the areas, directly or indirectly generating depreciation in customer service and care, physical and emotional overload of the teams, cascading absenteeism,



turnover and relocation of employees in shifts. However, the social aspects of the affected employees must be considered, since they are individuals in our society who have family, commitments and leisure outside the corporate environment.

In this study, it was observed the need for this hospital to use strategies, including compliance with regulatory standards, where it was possible to observe the effectiveness of these actions, with positive results for both the company and the worker, even if obtained at a low cost, given that most of the actions were due to compliance with standards and process management.

Positive results were also noted in the reduction of TMJ delivery in all areas and consequently in absenteeism, through compliance with NR 17¹, creation of COERGO, use of the MAPHO ergonomic tool recommended by ISO/TR 12296:2012 for employees in the care areas and the management of all TMJ delivered in Occupational Health with ICD M, in addition to the use of the indicators carried out by the entity.

5. CONCLUSION

We conclude that there was an efficiency in the strategies employed (management of certificates with ICD M, creation of COERGO, initiation of ergonomic actions in strategic sectors and use of the MAPHO ergonomic tool as a management model), resulting positively in the management and reduction of absenteeism coinciding chronologically with the applications in each area, a fact that led to the reduction of direct cost. Also the effectiveness of ergonomics as a protagonist in these strategies through the conduct of the ergonomist in all of these applied, in partnership with the DHO and Occupational Health sectors. We also verified the opportunity for specific studies of the impact of these interventions on the relationship with the bank of hours, overtime, increase in staff to comply with dimensioning/demand, labor liabilities, turnover, claims with health services, impact on public pension, social aspects of the lives of these employees in the health area and application of strategies similar to these in areas other than health.

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