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The Working Conditions of the Physiotherapist Acting In the State of Minas Gerais, Brazil

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Abstract: The objectives of this research were to describe the working conditions of physiotherapists in the state of Minas Gerais, to identify which characteristics of the work organization offered the greatest health risk and to investigate the relationship of symptoms reported with the workday. A questionnaire containing 29 questions was applied to physiotherapists who had telephone contact (whatsapp) available at the Physical Therapy and Occupational Therapy Union of Minas Gerais - SINFITO, and a descriptive and quantitative analysis of the data was performed, where the quantitative variables were indicated by means of the average and standard deviation and categorical variables were presented by frequency and percentages. To check the existing correlation in the frequency of the main working conditions and symptoms, the chi square test (X^2) was used. The most relevant characteristics for the study were: working hours over 30 hours a week; varied working hours with night work, over 6 patients attended per hour and autonomy to carry out their work. While the most reported complaints were: back pain, neck, shoulder, stress and anxiety. The dependency relationship between working conditions and reported symptoms was significant for patient movement and shoulder pain ($p < 0.05$), the requirement for poor posture to perform the job and leg pain ($p < 0, 05$) and the requirement of poor posture and shoulder pain ($p < 0.05$). These findings signal the need for collective and public action, which effectively interferes with the working conditions of these professionals and improves the work and health relationship.
Keywords: Occupational Hazards, Worker Health, Occupational Exhaustion, Physical Therapy,

I. Introduction

Work is making an effort that can be physical or psychological for the creation, execution of an activity or service. Work adds value to the activity performed, it can be pleasurable or not. In addition, it directly impacts the formation or complement of each individual's personal and professional personality. (ANTUNES, 2009).

With the new industrialization scenario, Administrative Theories emerged, which changed the way work is organized in industries. These theories were developed in order to promote a more organized work structure, aiming to eliminate unproductive tasks during the production process, thus guaranteeing efficient manufacturing. Over the years, several theories and administrative approaches have emerged to improve the production process, among which can be mentioned: Taylorism, Fordism, Structuralist Theory, Behavioralism, Organizational Development, Contingency, Sociotechnical approach (CHIAVENATO, 2014). However, the basic principle of the different forms of work organization has not changed, the premise is the same: increase in the organization's productivity and efficiency.

In general, administrative theories focus on the industrial or administrative production process, leaving the worker in the background when disregarding its biological, physiological, psychological and sociocultural aspects. The result of the application of these measures for companies is a manufacture with lower cost and maximum productivity of the worker. On the other hand, for the worker, this means performing monotonous, repetitive tasks with an intense production pace (CHIAVENATO, 2014).

It is observed that the concepts related to the forms of work organization are not exclusive to the industrial environment, as several segments have used these methodologies to organize their production, administrative structure and work space, an example of which is the health area. Matos and Pires (2006) conducted research on administrative theories and their influence on the hospital environment and identified that this environment still received strong influence from the Taylorist / Fordist model, from classical administration and from the bureaucratic model in its management and organization. The constant changes in this work environment, such as the entry of new technologies, adverse conditions imposed by the profession itself and the requirement for a new attitude of the professional in the face of market needs, seem to interfere in work relationships and influence the health of the worker (SILVA et al, 2016).

Within this universe of professionals, physiotherapists draw attention (BRUSCHINI ET.AL., 2018). Most of the work environments that this professional goes through have precarious conditions, such as: standing upright for a long time, leaning over the patient to perform manipulation activities, lifting, static position,

squatting repeatedly (WANG ET.AL., 2015). These working conditions are causes for the appearance or worsening of injuries (LIAO ET.AL., 2016).

Environmental conditions such as: poor lighting, slippery floors, inadequate furniture, and physical conditions such as the use of expressive force to perform a procedure are part of a physical therapist's daily scenario (QASSIM & ALSAYED, 2016). Since work represents a conflict between rules, objective and productivity, some factors such as: increased working hours, accelerated pace of assistance and a reduced number of professionals working in a sector, compromises the physical health integrity of the physiotherapists involved (GIRBIG ET. AL., 2017).

According to COFFITO (2017), in Brazil, there are 245,699 physiotherapists registered on the council and, despite the large volume of professionals in the area, the number of publications that address the physiotherapist's working and health conditions is still scarce, when compared to other health professionals. Thus, there is a need for studies and research that seek to understand the relationship between working conditions and the forms of illness of this population.

The objectives of this research were to describe the working conditions of physical therapists working in the state of Minas Gerais, to identify which characteristics of the work organization offer the greatest risk and to investigate the relationship of symptoms reported with the workday.

II. Methodology

This is an observational, cross-sectional, descriptive, quantitative study and approved by the Ethics and Research Committee, under CAAE 83275818.3.0000.5137. The target audience were physiotherapists enrolled in the Physical Therapy and Occupational Therapy Union of Minas Gerais (SINFITO-MG, 2017) , who had telephone contact (whatsapp) available at the institution and who were in full exercise of the function at the time of data collection. Retired professionals with less than one year of profession were excluded from the study.

During the month of September 2018 a message was sent to all physiotherapists affiliated with SINFITO (2017) inviting them to participate in the research, together with the research questionnaire through a link from Google Forms to be answered online. The message body had the same terms as an Acceptance Term, and the professional's non-response was considered as "refusal" to participate in the research and the complete answer to the questionnaire was considered as "accepted".

The questionnaire had 29 closed questions with a Likert scale (5 points) and some assertive questions. It addressed sociodemographic characteristics, employment conditions, corporate environment as a whole, body movement, psychosocial environment, private and family life, health and well-being at work.

The elaboration of this questionnaire was based on the 6th European Survey of Working Conditions (EUROFOUND, 2015) and the Translated Questionnaire of the Copenhagen Psychosocial Questionnaire (ROSÁRIO, 2013). In addition to these sources, the final questionnaire was also the product of research in articles whose approach emphasized the working conditions and health of physiotherapists.

To obtain the representative sample of this population, the statistical dimensioning was performed, using the formula described by Montgomery (2009) 7, n = [(z / E) ^ 2] * [P (1-P)], having as reference 23,084 physiotherapists who were registered with CREFITO - 48, in December 2017. Where (n) represents the sample size to be calculated, (z) is the critical value available in the normal table, which for this study was 1, 96, P is the probability of success and (1-P) is the probability of failure, with the confidence factor used being 95%. The margin of error (E) used was 8%. According to the calculation, the number of participants required to represent the total number of physiotherapists in MG and to validate the research, was at least 150 people.

The questionnaire was available for professionals to answer for 15 days. After data collection, a descriptive analysis was performed where quantitative variables were indicated by means and standard deviation, categorical variables were presented by frequency and percentages. To correlate the information found, the X^2 test (Pearson's Chi-Square) was applied using the Minitab version 18 statistical software.

According to Larson (2010) 9, the X^2 test (Pearson's Chi-Square) is used to test whether a frequency distribution fits into an expected distribution. In this research, the correlation existing in the frequency of the main work characteristics (working hours, remuneration, type of employment, posture) with aspects related to complaints of health conditions will be verified.

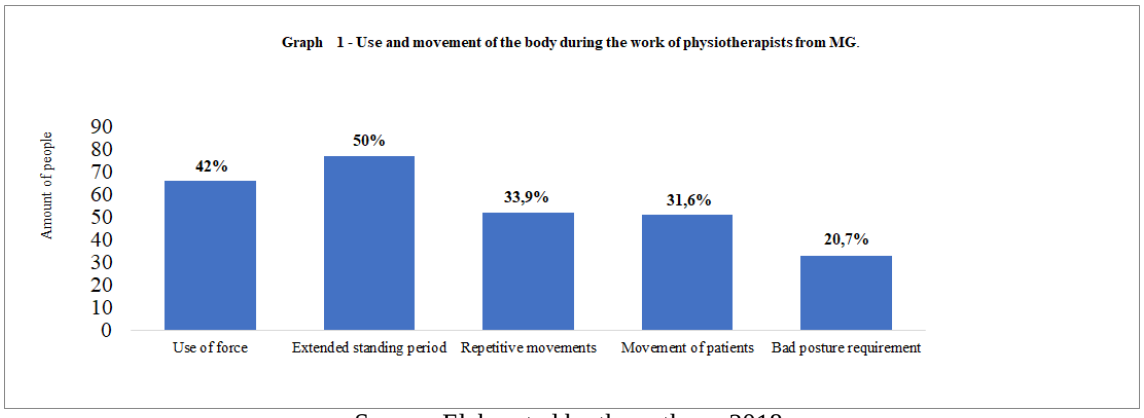
III. Results

Initially, 182 physical therapists responded to the survey. Of this amount, 26 professionals were excluded, of whom 8 were not engaged in physical therapy activities at the time of data collection, 17 had less than a year of training and 1 canceled the questionnaire, being eliminated from the research. Therefore, the sample of this study was formed by 156 physical therapists. The public was predominantly female (78.2%), with an average age of 29 years (SD ± 12), graduated on average for 09 years, working mainly in the area of orthopedics and traumatology (41.7%).

The main employment conditions reported by the interviewees were: self-employment (27%) and CLT (23%), with the majority having 1 to 2 employment contracts (86.2%), working 5 to 6 days a week (49.4%), working more than 30 hours a week (67.8%), working hours with night work (34.5%), receiving less than 4 minimum wages (64.4%) and without never working overtime (26.4%).

Regarding working conditions, 34.5% of physiotherapists stated that they had autonomy to determine the number of patients to be served, however, 10.3% responded to attend more than 6 patients per hour and only 39.6% managed to take a break. rest.

Graph 1 represents the frequency in (%) of the use and movement of the physiotherapist's body during work in the last month.

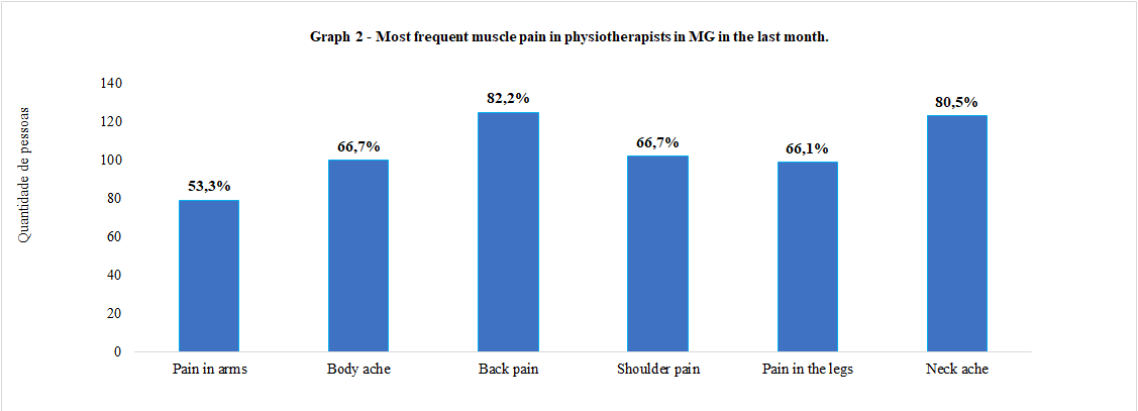


Source: Elaborated by the authors, 2018.

When asked about the work environment, 56.9% of physical therapists reported that their work requires a high level of skill and expertise. What draws attention is that even with the high demand, most have some autonomy to perform the tasks (47.1%) and can interfere with the quality of their work (48.3%).

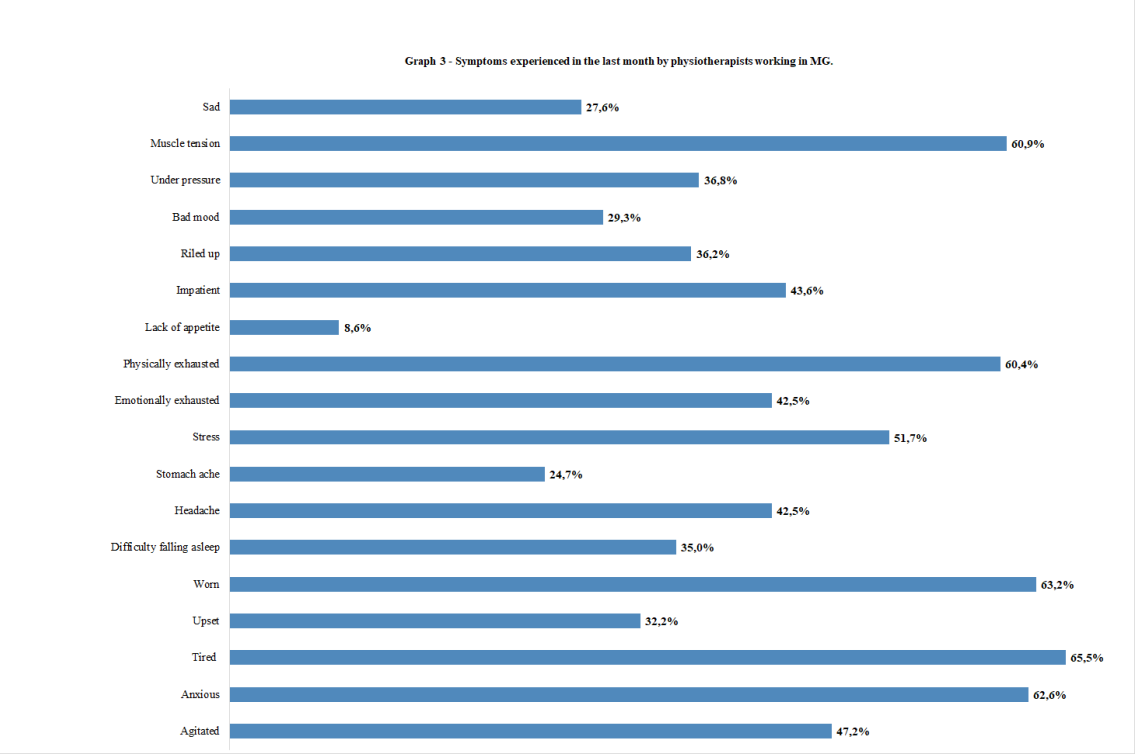
In the relationship between work and family, 13.2% stated that they rarely had time for leisure, and 38.5% of physical therapists said that in the last month, they dedicated less than 14 hours a week to their families. Regarding the way work has been affecting private life, 71.8% reported that the activities carried out during the working day have been demanding a lot of their time and energy.

In terms of health and well-being, all physical therapists had some complaints, the most cited were: back pain and neck pain, as shown in Graph 2.



Source: Elaborated by the authors, 2018.

Still on health and well-being, the symptoms that physiotherapists reported having felt more frequently in the last month were wear (63.2%), exhaustion (60.4%), tiredness (65.5%) , anxiety (62.6%) and muscle tension (60.9%), Graph 3.



Source: Elaborated by the authors, 2018.

In the last 12 months, about 7.5% of physiotherapists were away from their activities for more than 15 days due to illness, and 84.5% were absent for up to 5 days.

The variable fast pace versus physical and psychological symptoms showed the following frequencies: wear (151 statements), exhaustion (147 statements) and stress (141 statements). Repetition of activities versus exhaustion had a frequency of 140 statements. Varied work versus stress retracted 134 statements. Autonomy over their work versus stress exhibited 139 statements.

The dependency relationship between working conditions and reported symptoms was significant for patient movement and shoulder pain ($p < 0.05$), the requirement for poor posture to perform the job and leg pain ($p < 0, 05$) and the requirement of poor posture and shoulder pain ($p < 0.05$).

IV. Discussion

In the present study, only 23% of the participating professionals had CLT as their work regime. The frequency of cases in which physiotherapy professionals provide services to clinics and hospitals is notorious; however, they are considered autonomous, with no link to the employer or partner (SINFITO-MG, 2017). This happens most of the time with the consent of the professional, who, when faced with an increasingly competitive job market and adept at such practices, sees no other way out, but accept the job offer along the lines offered by the employer.

Federal Law 8.856 requires the physiotherapist to work 30 hours a week (COFFITO, 2017). However, 67.8% of professionals work above this limit and without rest intervals (50.4%). According to Article 7112 of the CLT, in any continuous work, whose duration exceeds 6 (six) hours, it is mandatory to grant an interval for rest or food of at least 1 (one) hour. Not exceeding 6 (six) hours, an interval of 15 (fifteen) minutes is mandatory when the duration exceeds 4 (four) hours.

In addition to the long working hours, 58.3% of the participants said they saw more than 2 patients per hour and 10.3% said they saw more than 6 patients per hour. It is worth mentioning that COFFITO (2017) also determines that the amount of assistance in 6 hours of work should vary at most between 6 and 12 patients, that is, between 01 and 02 patients per hour, and this variation occurs because of the area in which the physiotherapist is acting.

When asked about their free time for leisure and family, 13.2% and 38.5%, respectively, said they had little time for these activities. According to the 6th European Poll on Working Conditions (2018), around 18% of European workers were not satisfied with the balance between their professional and family life. Cardoso

(2013) affirms that this dissatisfaction may come from the new ways of compensating working hours and their intensification, which are placed in total asynchrony with family, social and leisure life.

The high frequency of complaints of discomfort and symptoms in the population of this study is in line with recent research. Silva et al. (2017) and Shoji et al. (2015) describe the illness of health professionals who work performing activities that require physical strength, such as transferring patients, repetitive movements, poor posture and standing up for a long time. In the present study, the symptoms of shoulder pain and leg pain were dependent on working conditions, with regard to patient movement ($p < 0.05$) and the requirement of poor posture when performing activities ($p < 0.05$). This implies that the physiotherapists in the sample are becoming physically ill due to the demands placed on the body during care.

The high incidence of musculoskeletal diseases is causing an increase in the rate of absenteeism. From the sample of this study, 7.5% of physical therapists were away from their activities for more than 15 days due to some illness and 84.5% were absent for up to 5 days. Brey (2017) states that the absenteeism of health professionals is related to diseases in the musculoskeletal system and back pain, a result of the working conditions where this professional is inserted. Rodrigues (2016) believes that absenteeism disrupts health institutions financially and in the quality of the service provided, in addition to creating an overload for other members of the work team, maintaining the vicious cycle of illness-withdrawal.

In this research, the percentage of professionals who have been away from their activities for more than 15 days is small in relation to the number of physiotherapists who missed work for up to 5 days. However, the fact that they are away for just 5 days is not enough to say that this professional is not sick. Presenteeism, that is, the presence at work, although ill, has increased in recent years, notably in the area of health and education (UMANN et al., 2012). According to Eurofound5, about 40% of the 44,000 European workers interviewed in 2015 reported working sick. This fact can be justified by the insecurity of stability in their jobs, given all the changes that are occurring in the organization of work, such as: restructuring in the public and private sectors, decrease in the size of the organization, reduction in the number of workers, increase in the number of people on temporary contracts and reduced benefits (PRIMO et al., 2010).

Statistically, the present research did not find any relationship between working conditions (accelerated work rhythm, monotony, varied work, autonomy) with physical and psychological symptoms: wear, exhaustion and stress. However, the analysis of the frequency found at the intersection of these variables, for example: fast pace versus wear (151 statements), repeatability versus exhaustion (147 statements) and autonomy versus stress (139 statements) call attention to the high number of statements in the sample 156 professionals.

The main limit of this study was the sample and the low responsiveness of the questionnaire. On this topic, Malhotra (2011) states that the low response rate is the main disadvantage associated with conducting a survey through digital media. Gonçalves (2008) believes that this low responsiveness is associated with the fact that people are not in the habit of opening messages from strangers for fear of being malicious software sent to their computers.

V. Conclusion

It is noticed that most of the characteristics of the work of the physiotherapists in this research do not meet the legal regulations of the category. Attention is drawn to the long working hours, the excessive number of patients attended per hour and low pay. With regard to health, a high number of physical therapists reported musculoskeletal pain and symptoms related to occupational stress, with pain in the shoulders and legs appearing correlated with patient movement and poor posture. These findings signal the need for collective and public action, which effectively interferes with the working conditions of these professionals and improves the work and health relationship.

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