

# Critical analysis of a Musculoskeletal Disorders Prevention Program

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The studies involving the development of occupational diseases and accidents at work prevention programs have delimited two facts. One of them is that the program must be linked to the general organization politics. The other fact is that the diagnosis and the intervention about the organizational culture are necessary for the program to reach its goals. This research have aimed to evaluate an ergonomic intervention called Legislature Court, – Prevention of Musculoskeletal Disorders Program – developed, during one year, at the in Santa Catarina, compounded by 61 work environments. The demand have come from the institution direction, which have noticed the growing rise of Musculoskeletal Disorders. Thus, the direction have hired two professionals from the Ergonomics area (psychologist and physiotherapist) for contributing to the team organization which would be formed by the institutions' employees. The PMDP have initially aimed: to investigate the diseases demand and to evaluate the professionals, able to participate in the multidisciplinary team which would develop the PMDP. The program have gathered diagnosis strategies and interventions highlighted by ergonomics, work psychology and physiotherapy. The strategies were brought in two dimensions: the organizational and the individual. On the individual dimension there were performed physical activities on the work environment, followed by discussions about body conscious, in 14 place of the institution, visitations for understanding the work conditions, followed by discussions about the furniture adequacy and body posture; and three groups of preventive activities. On the organizational dimension it was planned for the multidisciplinary team to integrate the department in charge of the maintenance of the building and the health department. For the critical analysis of the program's results, the data were collected by: a) historical rescue of the PMDP; b) surveys with the employees who participated in the multidisciplinary team; c) questionnaires in a stratified pre-sample of the activities' participants. The critical analysis of the program's results, can be initially understood, by the political aspect, due to the fact that the multidisciplinary team was built aiming the self-management, facing the human relations' institutionalization, which permeates the politics adopted by the Intitution. However, the team didn't reflect about the politics' attitude and how it was against the whole organization politics. The team professional project was intervening on the Musculoskeletal Disorders prevention. This made them to be recognized as references on Ergonomics and Health. However, the team wasn't recognized by the institution's direction, who didn't have a commitment with the PMDP. To conclude, the result's criticism shows the comprehension a team must have about its own politics, about its organization politics and how it can determine a Musculoskeletal Disorders Prevention Program and its limits.

## INTRODUCTION

Since the middle of the XIV century social matters have taken part in the health and disease process, linking the “multiple determinations arising from the social conditions of life and work structures”. The tendencies shown by the literature aims for the mediator aspects of the organizational culture under the healthy and pathological behaviors on the work environment. (Cruz, 2004; Tamayo, 2005, 2008). On this sense, as time goes by, it is highlighted that other factors, besides physical charges contribute to the incident of Musculoskeletal Disorders. Among them, there are others such as: psychosocial at work, political conflicts, work lawsuit, and organizational culture.

In one hand, the organizational culture is constituted by sociological, psychological and political aspects of groups and subgroups of an organization (Cuche, 1999; Sartre, 2002 & Silveira, 2003), and on the other hand, it's composed by genres and meanings of the activity (Clot, 2006), work organization, goals and standards and performance (Cruz, 2004). This way, it is important to make a map of the culture and organizational politics, when developing a program of prevention from occupational diseases and from Musculoskeletal Disorders (Fleury, 1996).

Related researches on the implementation of healthy programs on the organizations have questioned what are the most suitable interventions on the individual and group level, on

the prevention, treatment and rehabilitations scopes.

Another discussed point on these researches is the importance of the worker's role on the commitment of prevention and intervention. So, it can be inferred that the prevention programs of the Musculoskeletal Disorders must not either be strict, nor hierarchized but to promote the commitment of all the social actors of these programs.

It is important observing that the Musculoskeletal Disorders have a multifactorial etiology. The relation of the Musculoskeletal Disorders is delimited with the stress and stressing factors, physiological determinants and psychological suffering (Cruz, 2004; Tamayo, 2005, 2008). On this sense, there are aspects related to the individual and to the organizational culture, overall, in what refers to healthy conception, healthy behavior, pathological and to the possibilities that the organizations and the work process present for the peoples' healthy maintenance (Detours, 1986, 2004). Thus, it is verified that the incident of the Musculoskeletal Disorders are related to other dimensions. On the individual level there are: life quality, psycho sintomatic symptoms, anxiety, depression, arterial pressure. And, among the organizational dimensions, it is found the productivity, rotativity, absenteeism accidents and costs with healthy care, performance and work satisfaction, the burnout syndrome and the use of healthy services (Tróccoli, 2005).

The mapping of the organizational culture establishes the existing relation between the culture, the organizational politics and the psychosocial factors at work. It defines how these factors influence on the incident of the Musculoskeletal Disorders related to the activity genre, values, believes and work demanding, what signposts the need of a multiprofessional on prevention programs.

## **METHODS**

### **PMDP development**

The request for the development of the prevention program of Musculoskeletal Disorders have appeared with the direction of an Institution from the State, which observed, through the Human Resource and Healthy Departments, an increasing number of employees with healthy

problems on its work place, mainly with Musculoskeletal Disorders. On the first meeting, the director have exposed the following complains: Musculoskeletal Disorders; sedentarism, hearing problems, heart diseases, drug addiction, wide demand of psychological services. Most of the employees with sick leave license presented the Musculoskeletal Disorders diagnosis, in which this study is based.

The Institution direction have chosen for the hiring of two professionals of the ergonomics' area (psychologist and physiotherapist) to draw up the prevention program and to form an employee team of the Institution with the goal of carrying on the PMDP – Prevention of Musculoskeletal Disorders Program – after the hiring of the professional was done. When getting in the Institution, the professionals aimed to investigate work environments with a biggest incident of Musculoskeletal Disorders and to analyze if the professionals were ready to participate on the multidisciplinary team which was going to develop the PMDP.

The first step was the integration of an employee from the Institution on the planning of the PMDP. This employee, located on the Maintenance Department, was previously hired by the Human Resource Department because he was graduated in Ergonomics. He was in charge for the preliminary observations, in which it was identified: (a) 61 work environment constituted by a rich diversity of work processes, (b) 1100 employees, (c) the concern of these employees with the additional pay for insalubrity and, (d) the lack of a preventive structure on the Institution.

On this period, another employee, graduated in Physical Education, who was interested in the multiprofessional team, took part of it.

The second step was drawing up a prevention program and presenting it to the Institution leaderships. The program has gathered diagnosis strategies and intervention, based on ergonomics fundamental, work psychology and physiotherapy.

The strategies were brought in two levels: individual dimension and on the organizational dimension.

In 14 sites of the Institution, on the individual dimension it was performed, physical activities on the work environment followed by discussions about body conscience; observations with the aim of comprehending the work conditions, followed by discussions about the furniture adequacy and

body posture; three groups of preventive activities.

On the organizational dimension it was planned that the multidisciplinary team would integrate two meaningful departments on the organizational structure of the Institution:

a) the department in charge of the physical maintenance of the building – where the ergonomist was located; b) the healthy department. These departments were chosen, due to the fact that both professionals were capable of contributing for the success of the program.

### **Proceedings for the Critical Analysis of the PMDP**

The critical analysis of the results has started after 1 year of actions of the PMDP. For that, there were collected data, through the method of action research proposed by Haguete (2001), followed by a data survey about individual changes in relation to the participation on the program. The following proceedings were done: a) historical memory of the PMDP, using a documental analysis; b) interview with employees, which took part in the multiprofessional team and in the hiring of the psychologist and physiotherapist professionals. c) a questionnaire application in a stratified sample of 50 workers, participants of the proposed activities in the 14 work environment.

The issues mentioned on the interviews and the questionnaires were: life history at work; life history at PMDP; cultural change; personal experience with the PMDP; expectations regarding the PMDP; healthy guidance, work environment; experiences furnished by the stretching; practical changes in the PMDP; change results.

For a better notion of the actions, it was drew up a fluxogram with details about the research steps (Figure 1, p. 5)

### **RESULTS**

The critical analysis of the program results can be seen, by the means of the organizational dimension and by the individual experience dimension. In relation to the organizational points, it was verified that the multiprofessional team proposed to perform a mutual project, what characterizes its performance along with the group:

“ [...] I realized that the area was wide and I believe there's a cultural praxis in the body area and in the peoples psycho, which must be developed, so they can better assimilate this culture of acting, of thinking, of relating to other people, specially in the work environment, where the bureaucracy predomines.” (member of the multiprofessional team).

The necessity of sharing the PMDP goals, where the healthy maintenance makes part of the organizational culture is a basic comprehension of the multiprofessional team, but at the same time, it shows the difficulties that the bureaucratic institution imposes to the development of programs of this nature.

“We had to organize ourselves for working. We were a little anxious for concluding what we had planned. We only carried out 50% of what we planned.” (team member).

“Between the things we have planned [...] and the things we really could make, in loco, (there was a gap), not because the planning wasn't well done, but because the contrary facts were greater than the predictability.” (team member).

This way, an important fact for the viability of a healthy program in an institution must be the understanding that a team must have about its own politics and about the organization politics., and how it can determine the development of a prevention program from Musculoskeletal Disorders and its limits, as well.

On the organizational results, it was pointed out, by the Healthy Department boss, the influence of the PMDP for the medical exams performance, which consider the professional activity important:

“ It seems too long, but the public service, the culture change is too hard [...]. Perhaps these periodical exams came for staying; I feel that the PMDP have balanced the sectors. So, when performing the periodical exams, we always remember the guidance of the PMDP team” (Health Department boss).

The multiprofessional team members still are informally requested for performing the furniture specifications, for carrying out licitations and purchases, for drawing up the furniture projects and for renovation in the environment, according to the ergonomics principles and for the performance of stretching practice, after the end of the PMDP.

On the individual dimension it is possible identifying that the cultural change provoked by

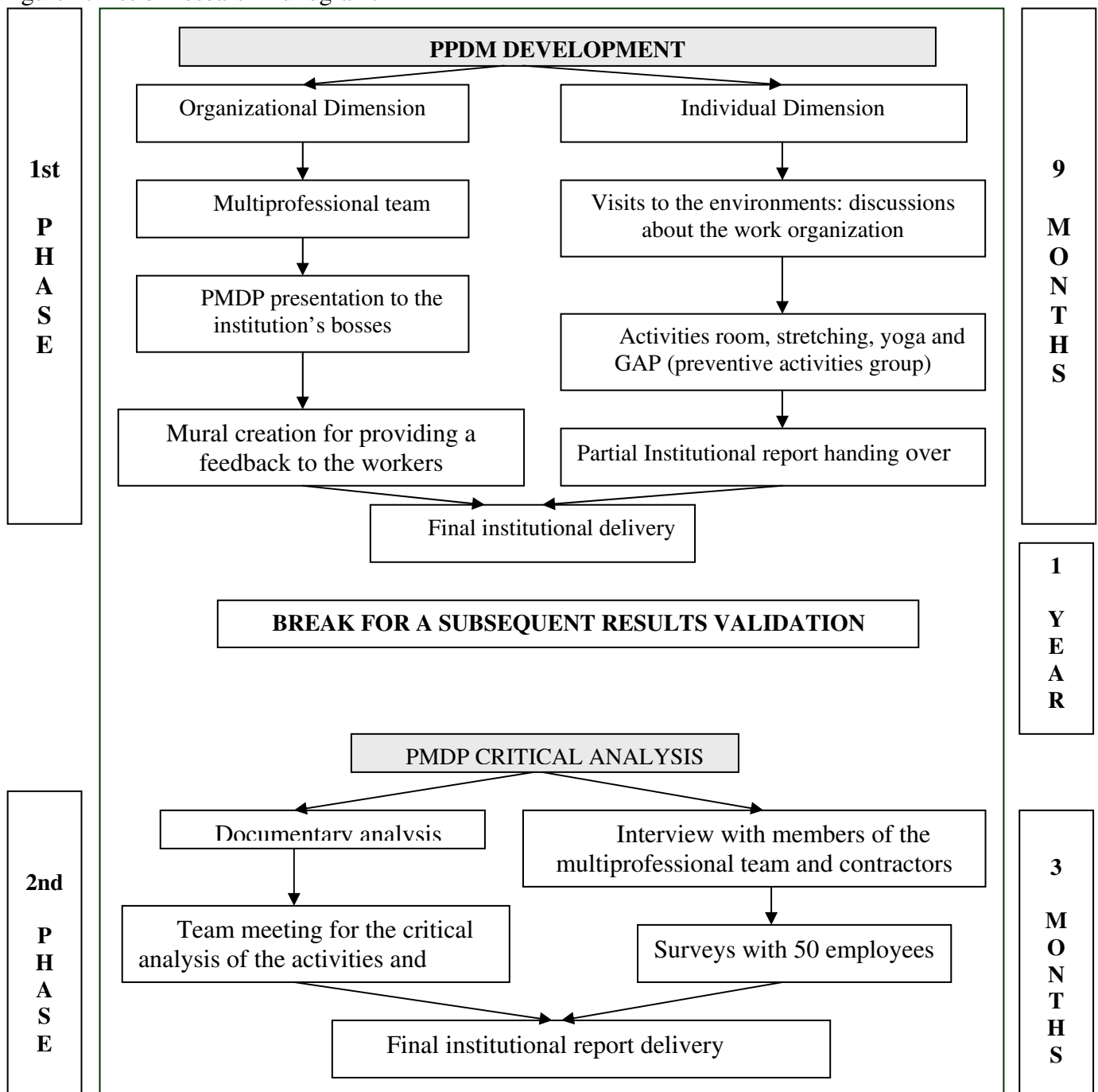
the PMDP have shown private experiences among the workers, realized by the multiprofessional team members:

“ There were the ones which complained about headache and talked about taking painkillers. After taking part of the stretching sessions, they showed an improvement at sleep and a reduction on the use of medicines for pain;

besides a reduction of backache, in the most tense shoulder height.” (team member).

The results showed by the questionnaires describe changes on the individual experiences related to the work environment, to the furniture, to the work organization, care for the healthy promotion and stretching in the work environment.

Figure 1: Action research fluxogram.



### DISCUSSION OF RESULTS

The healthy registration as a practice on the organizational culture was stimulated, in one hand, by the individual experiences provided by

the PMDP, and on the other hand, by the new organizational relations which were pointed when the multiprofessional team took part in the furniture specifications for licitation and purchase, and on the team requiring, for concluding environment renovation projects.

The main goal of the intervention through the PMDP, which is, the cultural change, was partially conquered, because a healthy politics focused on the prevention, still doesn't integrate the current structure of the analyzed institution.

On this sense, it was concluded that the PMDP reflected the institution politics, in a certain way, as Silva (2000) mentioned that the healthy politics must be strategically aligned to the general politics organization for the healthy sector to reach its goals.

For the conclusion of an efficient healthy politics it is necessary and administrative politics articulated between the high administration and the social actors involved on the work process. These findings corroborate the study of Whysall & Haslam (2006), in which points the importance of pointing the physical work environment, the organizational environment and the psychosocial field on the implementation of healthy and work safety.

Instead of not having integration between the high administration and the workers group, it was possible creating a group which performed the professional project against the crystallization of work relationships. The project is "[...] overcoming of a situation, for what the human does of what is done to him, even if he doesn't know himself on his goal" (Sartre, 2002).

On this sense, the project is the adding up in the course which "[...] involves the own denying of the things around me, with the synthesis that each denying performs, the same way, it involves the transformation of my own act, when it is realized, and the production of a new projects order, resulting of the structure of the old projects" (Jameson, 1985). There was this movement by part of the team; however, it was absorbed by institutional practices, already crystallized, what it is called as institutionalization, on this paper.

The professional project of the team members made that them to be recognized as PMDP reference, due to the fact that information and health experiences at work were spread on the institution. However, it is important that the professional project, shared by the team, associated to an individual project, is mediated by an institutional action politics.

It is recommended then, for future works, that the team organizes strategies for intervening in the institution politics, in order to facilitate the health practice insertion on the organization culture.

On the individual dimension, the strategies which aimed to propose experiences to the employees that motivated a new praxis on the relation with the health on the work environment weren't very success. However, it is recommended, that the experiences which brings up individual experiences must be continuous and developed for providing an organizational culture where the health makes part of a daily practice.

On this paper, the practical changes involved on the relation with the environment and the other, were considered. It is through the actions at the work environment that the human being gives a meaning to the artifacts, the relation with the others and with himself (Clot, 2006). Thus, when changing a certain practice on the work environment, for instance, can characterize, a change on the meaning of the environment itself. This fact shows the construction of new values, which points to a cultural change, when shared by the group.

The work itself, as a typically human activity, is imbued of a symbolic activity, that means, of a projected meaning on the environment, this living world built by the own human being fears. As Clot (2006) expresses: "the environment is the object of a social mood which is a collective activity, shared and mediated, at the same time by a very complex instrument, as a culture, for instance". This way, it is also recommended, including the meaning of the activity as a psychological important function to be considered on the organizational culture mapping, for the development of new prevention programs.

## CONCLUSIONS

The results analysis indicates, at least, two new perspectives for the institutional programs which aims promoting the health as part of the organizational culture. One of them, is the clarity that the team must have of: (a) its own politics; (b) the strategies for forming an alliance the program politics and the organization politics as strategies and; (c) the organizational culture, especially, in what is related to the health at work. The other is the effectiveness in acting on the individual experience scope in a continuous way, involving the social actors on the changing process.

## References

Clot, Y. (2006). *A função psicológica do trabalho*. Petrópolis, RJ: Vozes,

- Cruz, R. M. (2004). Distúrbios Musculoesqueléticos, processos de trabalho e cultura organizacional. In TAMAYO, A., *Cultura e Saúde nas Organizações* (pp. 231-252). Porto Alegre: Artmed.
- Cuche, D. (1999). *A noção de cultura nas Ciências Sociais*. Bauru: EDUSC.
- Dejours, C. (1986). Por um novo conceito de saúde. *Revista Brasileira de Saúde Ocupacional*, 54 (14), 7-11.
- Dejours, C. (2004) Subjetividade, trabalho e ação. *Revista Produção*, 14(3), set./dez.
- Dennis, D., St-Vincent, M., Imbeau, D. Jetté, C. & Nastacia, I. (2008). Intervention practices in musculoskeletal disorder prevention: A critical literature review. *Applied Ergonomics*. 39, 1-14.
- Fleury, M. T. (1996). *Cultura e Poder nas Organizações*. São Paulo : Atlas.
- Haguete, T. M. F. (2001). *Metodologias Qualitativas na Sociologia* (8a ed). Petrópolis: Vozes.
- Jameson, F. (1985). Sartre e a História. In JAMESON, F. *Marxismo e forma: teoria e dialética da literatura no século XX*. São Paulo: Hucitec,.
- Murta, S. G., Laros, J. A. & Tróccoli, B. (2005). Manejo de estresse ocupacional na perspectiva da área de avaliação de programas. *Estudos de Psicologia*, 10(2), 167-176.
- Murta, S. G. & Tróccoli, B. T. (2004). Avaliação de intervenção em estresse ocupacional. *Psicologia: Teoria e Pesquisa*, 20(1), 39-47.
- Sartre, J. P. A. (2002). *Crítica da Razão Dialética*. Rio de Janeiro : DP&A Editora.
- Silva. Y. C. (2000). O Preparo para o Trabalho de Risco. *Psicologia Ciência e Profissão*, 20 (4), 2-15.
- Silveira; A. L. (2003). *Crítica de Resultados de um Programa de Prevenção às Doenças Ocupacionais Desenvolvido numa Instituição Pública do Estado de Santa Catarina*. Dissertação de Mestrado, Engenharia de Produção, Universidade Federal de Santa Catarina, Florianópolis.
- Tamaio, A. (2008). *Estresse e Cultura Organizacional*. São Paulo: Casa do Psicólogo.
- WHYSALL, Z.; HASLAM, C. & HASLAM, R. (2006). Implementing health and safety interventions in the workplace: An exploratory study. *International Journal of Industrial Ergonomics*, 36(9), 809-818.