

# Contributions of the analysis of labor activity in the employee's return process after leave of absence due to RSI/WMSDs\*

## Contribuições da análise da atividade do trabalho no processo de retorno do trabalhador afastado por LER/DORT

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**ABSTRACT:** The increase in the number of employees on leave for RSI/WMSDs has embarrassed the Brazilian society when dealing with this problem, since the importance of its manifestations can be considered a serious public health problem. Employees on leave have been finding several difficulties in returning to work, since, in addition to functional limitations, they also face obstacles at work. Furthermore, the vocational rehabilitation of INSS does not ensure necessary improvements for an effective return to labor activities. Before this reality, this article aims to provide an understanding of how the analysis of labor activity contributes to the return process of employees on leave for RSI/WMSDs. The model proposed in the flowchart for the analysis of the work return process, after leave for RSI/WMSDs, is explained and associated with the hypotheses of the Activity Ergonomics. The analysis of labor activity allows the understanding of intrinsic aspects of the actions of the employees and their respective constraints, allowing to approach the need of the company with the potential of employees.

**KEYWORDS:** Return to work; Cumulative trauma disorders; Human engineering; Workers/psychology.

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**RESUMO:** O aumento do número de trabalhadores afastados por LER/DORT tem constrangido a sociedade brasileira a lidar com esse problema, visto que a importância de suas manifestações pode ser considerada um grave problema de saúde pública. Os trabalhadores afastados têm encontrado várias dificuldades ao retornar ao trabalho, uma vez que, além das limitações funcionais, também enfrentam obstáculos no trabalho. Além disso, a reabilitação profissional do INSS, não garante as melhorias necessárias para um efetivo retorno às atividades laborais. Frente a esta realidade, o objetivo deste artigo é proporcionar o entendimento de como a análise da atividade de trabalho contribui para o processo de retorno de trabalhadores afastados por LER/DORT. O modelo proposto no fluxograma para a análise do processo de retorno ao trabalho, após afastamento por LER/DORT, é explicado e associado aos pressupostos da Ergonomia da Atividade. A análise da atividade de trabalho permite a compreensão dos aspectos intrínsecos das ações dos trabalhadores e os respectivos constrangimentos, o que permite aproximar a necessidade da empresa com as potencialidades dos trabalhadores.

**DESCRITORES:** Retorno ao trabalho; Transtornos traumáticos cumulativos; Engenharia humana; Trabalhadores/psicologia.

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## INTRODUCTION

One of the highlights for the epidemiological profile of sickness related to work are the Repetitive Strain Injury/Work-related Musculoskeletal Disorders (RSI/WMSDs), which alongside psychic disorders and occupational accidents are the main causes of leaves, attributed to new requirements of the work<sup>1</sup>. We perceive that tasks are increasingly requiring initiative, communication, and exchanges between employees, i.e., different ways in the action process and recognition of capacities<sup>2</sup>.

The increase in the number of employees on leave for RSI/WMSDs has embarrassed the Brazilian society when dealing with this problem, since the importance of its manifestations is considered a serious public health problem.

The number of accidents involving Notification of Occupational Accident (NOA) in Brazil related to the disease was of 15,226 cases in 2013, considering that the codes of ICD-10 (International Statistical Classification of Diseases and Related Health Problems) with more incidence were of backache, shoulder injuries, synovitis, and tenosynovitis<sup>3</sup>.

In the first phase of the musculoskeletal sickness process, the invisibility of the pain origin raises doubts about the relation of the disease with work. This fact, associated with the concern about psychological and biomechanical aspects, leave aside the psychosocial aspect, which contributes to accentuate the bias around individuals on leave for RSI/WMSDs.

The biomedical point of view, which stresses the need for physical evidence of the lesion for characterizing RSI/WMSDs, hinders its recognition in the initial phase, when the manifestation occurs by pain or discomfort<sup>4</sup>.

Before the RSI/WMSDs diagnosis, the doctor in charge verifies the disease stage to decide on the possible leave of the worker. Once noted the need for leave and rehabilitation, employees are referred to a medical expert of the Brazilian National Social Security Institute (INSS), who evaluates and forwards them in accordance with their conditions/capabilities, following three distinct situations: a) the worker with permanent disability is forwarded for retirement; b) the worker for whom no disability is noted directly returns to the company; and c) in the case in which the worker presents a temporary disability, the worker is forwarded to the Vocational Rehabilitation Program (*Programa de Reabilitação Profissional*) of INSS. This process is referred to in the Constitution in such a way that workers can participate in the labor market and in the context in which they live. Therefore, the Vocational

Rehabilitation Program must provide the means for vocational and social readaptation<sup>5</sup>.

The process of inclusion of the person who returns to work is accomplished through the Vocational Rehabilitation Program of INSS, however, requirements to ensure complete rehabilitation, with effective inclusion or return of the worker to the social work environment, are not identified in such process<sup>6</sup>.

Employees affected by RSI/WMSDs encounter difficulties when returning to work, since, in addition to functional limitations, they also face obstacles alongside the working group and/or the company's leadership, and, often, the inadequacy to the new workplace. In this process, the Vocational Rehabilitation Program of INSS does not ensure necessary improvements for an effective return to labor activities<sup>7</sup>.

Whereas the Activity Ergonomics (AE) aims to understand the real work situation to effectively change it, this article seeks to understand the analysis of labor activity, defined by AE, as part of the Ergonomic Work Analysis – EWA<sup>8</sup>, and how it contributes to the process of returning of workers on leave for RSI/WMSDs.

We intend, through the activity analysis, to understand the work and recognition of the capacities necessary for a particular workplace, through intermediation between company, employees, and the Vocational Rehabilitation Program of INSS. The AE has fundamental concepts that guide the understanding of work situations to identify determinants and accomplish possible changes<sup>8</sup> that have a positive impact on health and productivity.

The proposed guidance also aims to operationalize the inclusion highlighted by Lancman et al.<sup>9</sup>, who deals with the return to work and the aspects required for its effectiveness.

In this process, the jobs that workers occupied before their leave and the jobs for which they return to are studied, i.e., activities selected by the company by mutual agreement with the Vocational Rehabilitation Program of INSS and the worker, which are adapted to receive workers who return after leave for RSI/WMSDs.

Success in the return and stay at work is related to the involvement of several agencies, fields, social actors, and professionals, which should direct their actions toward a common goal collectively predefined. Otherwise, workers are directed to jobs incompatible with their labor capacities, education, and qualifications or are excluded from the productive process<sup>9</sup>.

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Engineering of UFSCar, in the following line of research: Work, Technology, and Organization.

### **The process of returning to work in the Brazilian context**

According to Article 136, Decree 3,048/99 of Social Security, vocational rehabilitation is a service of Social Security, provided by INSS, aiming at providing the means of vocational reeducation or readaptation to the return to work of employees disabled (insured) because of illness or accident.

The insured forwarded to the Vocational Rehabilitation Program, after medical-expert evaluation, must, regardless of age and on suspension sentence of the benefit, be subjected to the program, which is established and funded by Social Security, giving minimum contribution time for which the insured is entitled.

However, the Vocational Rehabilitation provided by INSS faces difficulties due to the high demand, considering the restricted specialized staff, in addition to the financial difficulty in rehabilitation programs<sup>4</sup>.

The longer the time of leave, the lower the probability of return and stay in the work<sup>10</sup>. According to Meijer et al.<sup>11</sup>, the faster the return from medical leave, the easier the adequacy to the new job after the return.

When employees return to work they are often reassigned to functions incompatible with their clinical-functional pattern; with their education and professional qualification; or they are excluded from the productive process, they are “cast aside”, which reinforces failure experiences<sup>12</sup>.

According to Saldanha et al.<sup>13</sup>, the demand for vocational rehabilitation is large and covered by intersectoral policies, technical cooperation, and agreement of goals between those involved in the process of work reinsertion.

On the part of the Ministry of Social Security, proposals that include important aspects for effective vocational rehabilitation for the worker's return to the social work environment are not identified, i.e., with “the insertion of workers in jobs that allows their full social integration”<sup>16</sup>.

For Lancman et al.<sup>9</sup>, the return to work must occur for the same primary function or function compatible with the condition of health and labor capacity of the individual. And also considering that the success or failure of this process depends on several aspects, such as: work organization, vocational capacity, interpersonal relations, and labor capacity.

When, for some disability caused by labor activity, in particular RSI/WMSDs, people are temporarily excluded from work, they may be deprived of their privileges for work integration.

As expected in social security legislation, after leave and return of the worker who was sick, the visit of the staff of the INSS rehabilitation program is held. However, evaluations are punctual and restricted to cases of systematic resistance due to the return to work. Associated with this situation, the fragility of the staff to negotiate new jobs with companies is identified, since there is lack of awareness of the risks that can exist in the environment, in the process, and in labor relations, which results in low permanence of workers in new activities. This difficulty of articulating with companies often leads to resignation of workers or their return to the medical evaluation, which makes the process of vocational rehabilitation ineffective<sup>14</sup>.

The lack of cooperation between companies and public agency penalizes the worker. This fact identifies the precariousness in the treatment given by the Government to issues regarding health and work, to the extent that it deals separately with these aspects that are indivisible<sup>14</sup>.

The return to work results in a challenge before policies that guide employees on leave for RSI/WMSDs, since there are barriers and facilitators in the constitution of this process.

### **Methodological and Conceptual Hypothesis**

The theoretical methodological basis that guides the study is Activity Ergonomics, which aims at the study of the actual labor activity, involving representations of the work of those who do it and those who plan the activities, and as a method of analysis, the study is based on the principles of EWA<sup>8,15</sup>.

According to EWA<sup>8</sup>, labor activity is not restricted to the set of rules previously known, but to regulations, considering variabilities (regarding production and subjects involved in the work), workload (physical, cognitive, and mental), and operational procedures (different ways of doing the work, i.e., people adopt different ways of achieving the objectives and the means with which they operate, to adapt the workload to the way they work, using their capacity and ensuring their health).

Thus, activity is what the worker effectively do to accomplish the task, i.e., to do what is prescribed or what must be done according to the company's planning. Therefore, it involves all actions of the workers for them to do their share of the production work. It also involves

the interaction of the worker with the artifacts, aiming to fulfill the tasks prescribed by the company. "Labor activity is achieved in real conditions and produces effective results"<sup>16</sup>.

According to AE hypotheses, the activity is understood by systematic observation, in a participatory way, of work situations, seeking to understand how the work is effectively done<sup>8,15</sup>.

This methodology observes human behavior, meticulously analyzing each of the displacements, communications, postures, direction of gaze, behaviors, operational procedures, cognitive procedures, i.e., what relates the worker with the activity.

## METHODS AND TECHNIQUES

Since this article aims to provide an understanding of how the analysis of labor activity contributes to the return process of employees on leave for RSI/WMSDs, we have as a proposal the study of jobs responsible for the leave and those chosen for the reinsertion of workers.

The structure proposed for the analysis of the process of returning to work after leave for RSI/WMSDs, synthesized in the flowchart<sup>17</sup> in Figure 1, is based on the model of inclusion of disabled people designed by Simonelli<sup>18</sup>. This contributed to the understanding of the role of social actors involved in the process, and proposes, through the EWA method and the application of the Family of International Classifications (FIC), to identify the technical requirements required by the activity, barriers and facilitators, in addition to the potential of disabled workers. The structure used in this article is based on the flowchart of the inclusion of people on leave for RSI/WMSDs, the model of Simonelli<sup>18</sup>, applied to the reality of sickness at work and on the perceptions and perspectives of different social actors (analysts of the Vocational Rehabilitation Program of INSS, employees, company) involved in the process from interviews, application of labor activity analysis, and evaluation from the FIC.

The flowchart starts with the diagnosis of the medical expert of INSS and the work leave, followed by a period of treatment/rehabilitation/readaptation. Then, the employee is forwarded by the medical expert directly for returning to work, for retirement due to disability, or even for the Vocational Rehabilitation Program of INSS if a temporary disability had been identified. From the Vocational Rehabilitation Program of INSS, the employee returns to work.

The flowchart has two representations of the world of work: on one hand, there is an analysis of the potential and capacities of workers that are returning to work after leave for RSI/WMSDs, and on the other hand, the company actions performed to ensure their reinsertion.

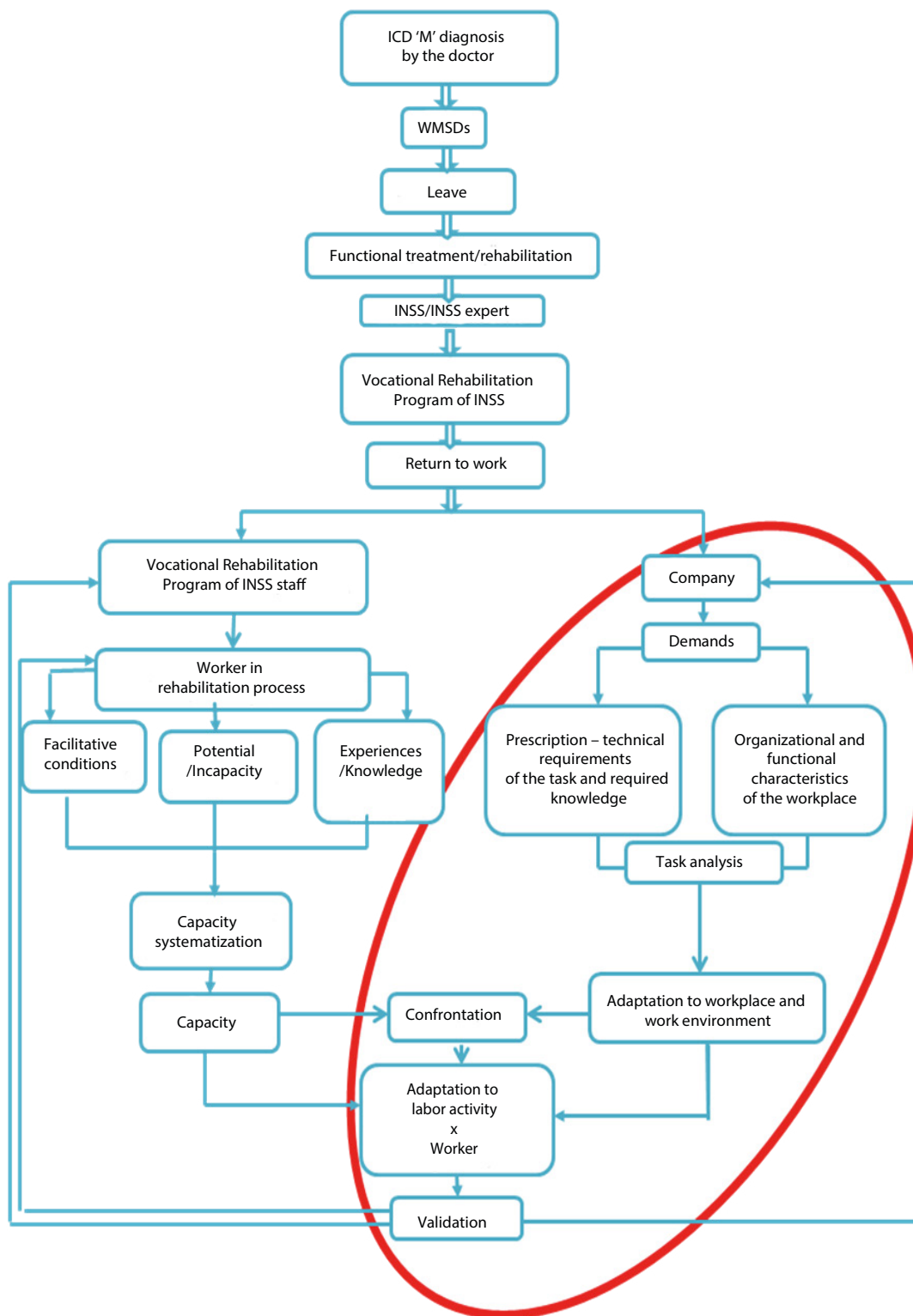
The analysis of the potential of workers shows their capacities (physical and mental) and limitations for the job. Capacity systematization, from the potential, facilitators, experiences, and knowledge of workers, show potential tasks to be performed by them when returning to work.

The part highlighted in the flowchart (Figure 1) shows the company actions with its demands, technical requirements, and knowledge of the task, which guide the execution of the job, in addition to organizational and functional characteristics, which are essential in the adequacy of workplace and work environment for reinsertion<sup>17</sup>. The emphasis on the actions of the company is the aim of this study.

## DISCUSSION

Ergonomic Work Analysis (EWA) considers the employees, individually and collectively, in the construction of health, capacities, and, at the same time, the relationship between the conditions, activity, and results, represented by the model of integrative function of labor activity<sup>8</sup>. In addition, EWA is based on the labor activity point of view, accomplished through the effective participation of the worker, to understand physical, cognitive, and organizational dimensions of this activity<sup>8</sup>. Understanding the labor activity aims to change the work to make it more suitable to psychophysiological characteristics of workers and to improve the efficiency of the production system<sup>16</sup>.

The adequacy of workplace and work environment and the confrontation of the capacities of the workers facilitate the analysis and adaptation of labor activity to their capacities and potential. From the methodological hypotheses of AE, and with the construction of the method of analysis based on the principles of EWA, the adaptation of labor activity to the worker will, subsequently, also require validation among social actors of this process: employee (main actor, reinserted in the job), company (actor responsible for the choice and adaptation of the jobs for reinsertion of the worker), and the Vocational Rehabilitation Program of INSS (actor that plays the intermediary role between employee and company and that should be a part of the choice of the job for reinsertion).



Source: adapted from Silva and Camarotto<sup>17</sup>

**Figure 1** – Flowchart of inclusion of people returning to work after identifying RSI/WMSDs

The validation between the three social actors is essential for the analysis of labor activity, since it is a process that has its basis constructed together and that requires a conclusion that is in accordance with the reality of the return.

The analysis of leave job and reinsertion job can demonstrate whether or not there was significant change to the worker regarding physical (space, load handling, and posture), organizational (repeatability and content of the activity), and cognitive (level of attention and surveillance required by the activity and decision-making) aspects.

The narrative of workers through the interview brings important data about the psychosocial aspect of work, i.e., whether they are satisfied with the new job; whether the analysis contributed to this process; how do they feel before coworkers; how do they feel regarding the new job.

The interview is defined as a conversation between two people, conducted by the interviewer's initiative, aimed to provide relevant information to a research object. Its use allows us to present the experiences lived by an individual, a group, or an organization and is able to verify daily contents, opinions, and motivations of participants in the story, the protagonists of social facts<sup>19</sup>.

## CONCLUSION

The analysis of labor activity allows the understanding of intrinsic aspects of the actions of

employees and their respective constraints, allowing to adapt the requirements of the company with the potential of employees.

The operationalization of the process of returning to work, regarding the preparation of the company for inclusion and perception of the worker in the process, is demonstrated as a need in the world of work, in which we perceive that social actors, employee, company, and the Vocational Rehabilitation Program of INSS are little articulated.

In the process of returning to and inclusion at work, it is necessary that technicians of the Vocational Rehabilitation Program and of the company to be aware of the work that is actually performed by employees, recognizing their labor potential and capacities. The AE methodology and use of FIC allow this better understanding of the jobs and the capacities of the worker, in such a way that the analysis covers beyond the physical aspects of the work, but also approaches cognitive and organizational aspects, which are theme of deepened studies in ergonomics.

This study is at the stage of field development in real work situations for the validation of the proposal, aiming to contribute to a future analysis model in the return of the employee on leave for RSI/WMSDs.

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