# RESEARCH

## QUALITY OF LIFE AND WORK SATISFACTION: THE PERCEPTION OF NURSING TECHNICIANS WHO WORK IN THE HOSPITAL ENVIRONMENT

## QUALIDADE DE VIDA E SATISFAÇÃO NO TRABALHO: A PERCEPÇÃO DOS TÉCNICOS DE ENFERMAGEM QUE ATUAM EM AMBIENTE HOSPITALAR

CALIDAD DE VIDA Y SATISFACCIÓN LABORAL: PERCEPCIÓN DE LOS TÉCNICOS DE ENFERMERÍA QUE TRABAJAN EN EL HOSPITAL

> Jacinta Sidegum Renner <sup>1</sup> Dorci Viegas da Rocha Taschetto <sup>2</sup> Gladis Luisa Baptista <sup>3</sup> Cláudia Rafaela Basso <sup>4</sup>

 <sup>1</sup> Physiotherapist. PhD in Production Engineering-Ergonomics. Professor, Researcher at the Diversity and Inclusion Program of the Feevale University. Hamburgo, RS – Brazil.
<sup>2</sup> Nurse. Graduate in Health Management. Secretarial of Health in the City of Arambare, RS – Brazil.
<sup>3</sup> Nurse. PhD. Manager. Full Professor at the Feevale University. Novo Hamburgo, RS – Brazil.
<sup>4</sup> Designer. Novo Hamburgo, RS – Brazil.

Corresponding Author: Jacinta Sidegum Renner. E-mail: jacinta@feevale.br Submitted on: 03/07/2013 Approved on: 11/04/2014

## ABSTRACT

Quality of life for professionals working in a hospital environment is essential, since these are caregivers and they deal with the preservation and maintenance of life, and in many cases end up neglecting their own health. Therefore, the aim of this study was centered on verifying the perception of nursing technicians on their quality of life and satisfaction with their work. This research is characterized as a descriptive observational case study, with analysis and discussion of data using on the quantitative and qualitative paradigm. The study site was a hospital in the Vale dos Sinos (RS). The sample was composed of 49 nursing technicians. The results indicated that the nursing technicians are satisfied with their physical environment and their interpersonal relationships. The highest rates of dissatisfaction are related to low wages, which leads to the consequent necessity for more than one job, resulting in physical and emotional burden and, consequently, negative interference in quality of life. **Keywords:** Nurses; Quality of Life; Human Engineering.

#### RESUMO

A qualidade de vida para profissionais que atuam em ambiente hospitalar é essencial, uma vez que estes são cuidadores e lidam com a preservação e manutenção da vida e, em muitos casos, acabam por se descuidarem de si e da sua saúde. Portanto, o objetivo deste estudo esteve centrado em verificar a percepção dos técnicos de enfermagem sobre a sua qualidade de vida e a satisfação com o seu trabalho. Esta pesquisa caracterizou-se como um estudo de caso observacional descritivo, com análise e discussão de dados sob o paradigma quantitativo e qualitativo. O campo do estudo foi um hospital do Vale do Sinos (RS). A amostra foi composta de 49 técnicos de enfermagem. Os resultados indicaram que, quanto ao ambiente físico, assim quanto aos relacionamentos interpessoais, os técnicos de enfermagem estão satisfeitos. Os mais altos índices de insatisfação estão relacionados à baixa remuneração, o que acaba repercutindo na necessidade de mais de um emprego, implicando sobrecarga física e emocional e, em consequência, interferência negativa na qualidade de vida.

Palavras-chave: Enfermeiros; Qualidade de vida; Ergonomia.

#### RESUMEN

La calidad de vida de los profesionales que trabajan en el ámbito hospitalario es esencial, ya que son los cuidadores y tratan de la preservación y mantenimiento de la vida y, muchas veces, descuidan su propia salud. Por lo tanto, el objetivo de este estudio se centró en verificar la percepción de los técnicos de enfermería de su calidad de vida y de la satisfacción con su trabajo. Esta investigación se caracteriza por ser un caso de estudio observacional descriptivo, con análisis y discusión de los datos en el paradigma cuantitativo y cualitativo. El campo de estudio fue un hospital en el Vale dos Sinos (RS). La muestra estuvo conformada por 49 técnicos de enfermería. Los resultados indicaron que los técnicos de enfermería están satisfechos con el entorno físico y con sus relaciones interpersonales. Los índices más altos de insatisfacción están relacionados con los bajos salarios, con la consiguiente necesidad de tener otro trabajo más, lo que resulta en carga física y emocional y, en consecuencia, se produce una interferencia negativa en la calidad de vida.

Palabras clave: Enfermeros; Calidad de Vida; Ingeniería Humana.

## **INTRODUCTION**

The theme "quality of life" is discussed through different viewpoints. In the health area, when a more focused view is considered, quality of life is centralized in the ability to live without illness or overcome the difficulties of health status or morbidity conditions. When viewed under a broad understanding, it relies on the comprehension of fundamental, material and spiritual human needs and it is primarily related to satisfactions of the most basic needs of human life, such as food, the access to drinking water, housing, work, education, health and leisure. These material elements are interconnected to comfort, wellbeing and individual and collective achievement.<sup>1</sup>

Still in conceptual terms, the preposition of subjectivity, multidimensionality and positive and negative dimensions of quality of life are also reinforced in the workplace: quality of life is perceived individually by the employees and should involve safe work conditions; a job worth doing; adequate compensation and benefits; some stability in employment; competent supervision; and feedback on their performance, opportunity for growth and workplace learning.<sup>2</sup>

When discussing quality of life in the workplace, it is fundamental to consider the ergonomic aspects involved in working conditions, activities and the environment, since ergonomics is one of the best and most effective tools to promote quality of life at work. Ergonomics focus on the relationship between man and the working conditions, from posture and body movements (sitting, standing, static and dynamic, in effort or not), environmental factors (noise, vibration, lighting, climate and chemicals), to equipment, control systems, roles and performed tasks.

In the specific case of hospital environment, the ergonomic aspects involved in an evaluation should go beyond the adaptations of working stations, tables' height, countertops, stretchers and beds. Ergonomics have a very close relationship with work conditions in the organizational sphere, mainly encompassing the content of the work. These aspects comprise the pace, journey, environmental conditions, configurations of activities and working positions, the way in which work is organized and the relationships in the workplace.

When discussing the relationship between the subject and his/her work environment, it must be considered that people spend most of their lives involved with work, living within their companies and/or institutions with their superiors and coworkers, therefore, this relationship should be as healthy as possible. In this case – the hospital environment –, this should be a healthy environment, since the nursing practice is characterized by activities which require high interdependence among the professionals of the team. In this case, the relationships and work motivation emerge as fundamental aspects in the search for more efficiency and quality in the nursing care to the patient, which should not be dissociated from the workers' satisfactions with their job. In the reality of a hospital environment, it is very common to find in a nursing professional, who is also a caregiver, displaying certain disregard and carelessness with their well-being and quality of life.

Conceptually, work satisfaction implies a subjective process, which makes this phenomenon complex and difficult to define, varying according to individual singularities, regarding the contexts and circumstances. It can also vary in the same person due to the age group in which the person is considered to be and his/her sources of personal satisfaction over time.<sup>3</sup> Satisfaction is subjected to internal and external influences to the immediate work environment.<sup>4</sup> Adding to this, personal satisfaction has been one of the most studied variables in the context of organizational behavior, since it represents one of the most important human outcomes of work and it has been associated with performance.<sup>5</sup>

Correlating the influence of work satisfaction and quality of life, we must cite Hackman and Oldham, who propose a conceptual model of work satisfaction entitled Motivation-Hygiene model, in which five central dimensions are stated: a) the variety of task which requires the use of multiple skills and talents of the worker; b) identification of the task which represents the degree in which work is shown as a whole, including its results; c) meaning of the task that corresponds to the degree in which the work impacts the lives of others; d) autonomy with regard to how the work provides freedom, autonomy and discussion in the elaboration of personal and action schemes, as well as in the determination of the procedures used and how they are conducted; e) feedback, which represents a set of direct and clear information to the worker in the development of his/ her activities' usefulness and efficacy in his/her work.<sup>6,7</sup>

In this study, the levels of satisfaction related to the various ergonomic aspects, especially those focused on the content and organization of work, correlate with the model proposed by Hackman and Oldham.<sup>6,7</sup> From these assumptions, it is evident that the relationship between work satisfaction and quality of life exists. It is also noted that from the aspects proposed in the use of a macroergonomic<sup>8</sup> design tool, another relevant and determining factor for quality of life of nursing technicians was identified, and it is the wage issue. This aspect deserves special attention, because it implies the need for working more than one job, which tends to greatly affect quality of life.

Since this study is specific to the work of professionals in the hospital environment, it is relevant to describe the context, in which this research was developed, in a medium-sized hospital, with 67 beds, being 100% of these registered in the Unified Health System (SUS). It has 3,042.47 m<sup>2</sup> of built area. The hospital is located in a country city of Rio Grande do Sul, it is the only hospital of the city and one of the few in the region which re-

ceive patients from SUS. The hospital environment is a formal social space, materially defined, where relations from different orders are established, however, they are mainly determined by the social relations of production of a work directed to another human being – the hospitalized subject.<sup>9</sup>

From these assumptions, when considering that nursing technicians represent the majority of workers in the hospital environment, the research problem is exposed: what is the perception of the nursing technician about his/her quality of life and work satisfaction? From the research problem, the study objectives were formulated, with a main focus of the evaluation of quality of work life (QWL), under the aspect of satisfaction of nursing technicians working in hospital environments. The specific objectives were focused on investigating the ergonomic characteristics of the work from the perspective of macroergonomics, as well as work conditions related to work organization.

## **METHODS**

This study is a case study of observational and descriptive characteristics, of quantitative and qualitative nature. The study sample were nursing technicians working in a hospital institutions of Vale do Rio dos Sinos - RS, Brazil. It is highlighted that this hospital was chosen as the setting for the ease of developing the research, since one of the researchers works in this institution and has a close relationship with the board and, when proposing the study, immediately obtained permission to conduct it. Consequently, there was facilitation for the approach, because the board understood that this study would be an opportunity to verify the level of satisfaction of a significant portion of its employees. One of the facilitating factors was that in this hospital environment, there was a repressed demand, because until this study, no instrument had been applied to assess the work satisfaction levels. Thus, this research also had the characteristic of a participatory research, since some aspects reported are the result of an everyday perception and experience of one of the researchers in this hospital.

The staff of nursing technicians in this institution is composed of 66 employees of both genders. For this study, a simple probabilistic sample was obtained, being the number of 66 employees calculated with a margin of 95% confidence and error of 5%.

In terms of sampling, it is important to highlight the ease of approach to nursing technicians sue to the proximity relationship of the researcher. On the other hand, it was necessary to be more careful in the approach to not induce the participation, since the researcher is a nurse and has different hierarchical status from the rest of the team. Therefore, considering these factors, the employees were asked to participate in the study only after knowing the objectives and methods of the research and signing an informed consent (IC). Thus, we tried to preserve the ethics and create opportunities for the employees to have the maximum of tranquility to choose to participate or not of the study.

For data collection along the study subjects, the macroergonomic design (MD)<sup>8</sup> toll was used, which is utilized in the macroergonomic analysis and design of work (MEAD). It is a structured questionnaire from a previous interview, which aimed to identify the perception of workers about their activity, as well as to find and analyze the physical environment conditions, working station, organizational factors, pace and routine of work, being these elements important to determine the worker's quality of life. This questionnaire contains items of ergonomic demand (IED), which can subconsequently be transformed into quantitative data. Ergonomic demand is understood as the worker's manifestation related to the role and work environment and execution of tasks relevant for his/her function, directly connected with ergonomic and work quality of life.<sup>8</sup>

The methodology of macroergonomic design proposed conducting an open interview with 30% of the population, and then, applying the questionnaire to 100% of the population - which will be the total study sample. In this study, the questionnaire was applied to 67% of the population of nursing technicians in the hospital site. The questionnaire consists of a number of questions, followed by a visual analogue scale of 15 cm, with two anchors at each end. The intensity of each answer may vary between zero (unsatisfied or not important) and 15 (satisfied or very important), thus assigning value to each respondent item. Data from the questionnaires are tabulated and prioritized according to the level of dissatisfaction or importance. The scale is easy to understand and allows generating continuous data. Thus, the subject marked in the scale his/her perception regarding demand, i.e., the ergonomics and quality of life problems that were investigated.

Regarding the research procedures, initially we contacted the hospital director. Then, after the acceptance was formalized through an Informed Consent for Data Use which was handled in a new meeting with the director, besides a detailed explanation on the objectives, methods and the study procedures. After the formalization of the study with the board, a meeting with all the nursing technicians was held in a specific room for meetings, in which all aspects of the study and what would be the involvement of the participants was explained and clarified. During the meeting, it was exposed that the participation was voluntary and that the participants would not be identified. After the clarifications, an IC was handed.

To apply the methodology of macroergonomic design, first, an open interview was conducted with 30% of the participants. The questioning was based on the following questions: how do you perceive your work? What does your work consists of? How do you feel working? From these questions, the answers were grouped according to affinity and a semistructured questionnaire was elaborated with a visual analogue scale. This questionnaire was handled out to all participants who signed and agreed to participate in the study, and the majority took the questionnaire to be completed at home with more tranquility.

For the feasibility of the study in ethical terms, the guidelines followed were from the National Council on Health for research with human beings and the National Committee for Research Ethics (CONEP), established in the Resolution No. 196/1996, as it is a non-invasive research and did not involve any manipulation that could infringe the research ethics. The project was approved by the Ethics in Research Committee (CEP) of the Feevale University, under case No. 4.06.02.10.1636. Data collection only began after the approval from the Ethics in Research Committee. The study site was the work environment in which one of the researchers works.

According to the methodology of the macroergonomic design, the results relevant to the questionnaire with the visual analogue scale will be presented in graphics, represented by arithmetic means. These results are grouped according to the items of ergonomic demand (IED), in constructs. The qualitative results from the open interview are mentioned in the global context of the results, as a way to complement the quantitative data. It is emphasized that the results of the averages of the questionnaire (in visual analogue scale) applied to the nursing technicians are exposed in the following charts. The intersection point between the level of satisfaction and dissatisfaction is represented by the value 7.5 on the scale, and the closer to (0) the highest level of dissatisfaction; and the closer to (15), the highest level of satisfaction.

## **RESULTS AND DISCUSSION**

At a first moment, some characteristics of the participants are presented. After that, the results regarding the perception of quality of life from the nursing technicians who work in a hospital environment are presented, more specifically in relation to the following aspects: the characteristics of the station/activity, the work content and the factors related to work organization. These results are presented in Microsoft Excel graphics and are separated in constructs, i.e., were grouped according to affinities.

Regarding the characteristics of the sample, it was composed of 49 nursing technicians, and consisted of young adults, with the predominant age group of 20-30 years old. As for the distribution of individuals per shift, the sample consisted of 10 workers in the morning shift, due to the fact that it is the period with higher number of activities related to nursing work. Nine workers were on the afternoon shift and 17 on the night shift. The high number of nursing technicians on the night shift is due to the work scale, which is 12/36 hours, meaning 12 hours of work for 36 hours of rest, requiring two working groups, one for each night (N1;N2).

#### **RESULTS REGARDING STATION/ACTIVITY**

In this construct, the aspects related to quantity and quality of equipment and tools used for work, the physical space, seat, table, workstation and work posture were considered (Figure 1).

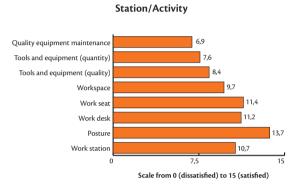


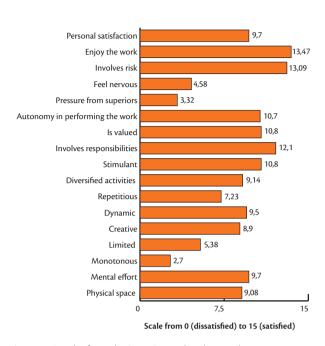
Figure 1 - Results of interviews related to workstation and activities.

Regarding the equipment, tools and supplies used in performing activities during the workday, the item "quality and equipment maintenance" was the main complaint of the employees, reaching 6.9 on the scale. In general, in a hospital environment, the workers need the equipment in good working order, to give adequate care to patients. In daily work life of one of the researchers working in this hospital, it is identified that in many cases the equipment are with defects and/or are not in the location where it was supposed to be, which makes it difficult to find it in cases of emergency.

As for working posture, the results indicate a good satisfaction rate, which is justified by the constant required displacements due to the work activities. In physiological terms, this is very interesting, because the work can be classified as dynamic, which tends to keep the body out of the muscle fatigue process. It was noted during the direct observation of the work activities that the possibility of postural alternation occurs, especially during the act of registering the events and procedures in patient charts. The postural alternation is considered ideal, according to the Technical Note 060/2001 of the Ministry of Labour and Employment.<sup>10</sup>

#### **RESULTS REGARDING THE WORK CONTENT**

This construct is related to the aspects of work content, with the intrinsic components to activity performance, how it occurs and what elements interfere in its value and relevance as work activity in the subject's lives (Figure 2).



#### Work content

Figure 2 - Results from the interviews related to work content.

By verifying the content of the work, the results indicated that monotony and limited work are the issues most considered significant in terms of dissatisfaction. In this case, it is noted that although the operational cycle is considered broad (total execution time of a given activity), the tasks repeat themselves in the daily routine, exemplified by giving medications, monitor vital signs, and register occurrences in the chart, which are repeated incessantly. This reality of repetitive work and the relation with monotony were confirmed when the result of the monotony IED was evaluated as a high level of dissatisfaction, represented by the value 2.7 in the scale.

Regarding enjoying the their work, the results were considered satisfactory. In this sense, we noticed a somewhat dichotomous situation, because at the same time the nursing technicians evaluated as negative various aspects of the work, mainly the IEDs - feel nervous, pressure from superiors, repetitiveness and monotony-, they also understand the work as pleasurable and rewarding. This reality is evident when the participants were questioned during the open interview about work satisfaction. This feeling was expressed as follows: "it is very important to do what you like and I enjoy very much what I do", and even "do it well and knowing that you are doing something good is everything to me". With the same focus, another report was found: "to feel useful at the work is essential to make me feel good and accomplished as a professional". From these statements it is possible to infer that satisfied workers, committed to their work, tend to be happier and more motivated, due to other factors extrinsic to the work process, i.e., there are other sources of motivation involved.

In this context, it is relevant to mention some motivation and satisfaction theories which, although present some conceptual and of approach variations, have as convergent points satisfaction and motivation for work depend on many factors which are intrinsically associated and do not depend exclusively on wages, but also are related to favorable working conditions, promptness, motivation and potential of development of skills and talents that are innate factors in any individual.<sup>10-13</sup>

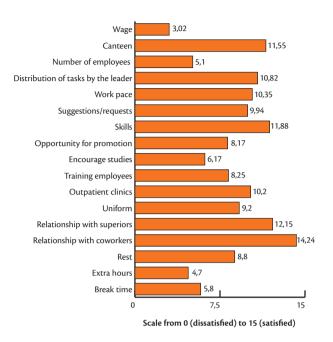
#### **RESULTS RELATED TO WORK ORGANIZATION**

In this study, when work organization is mentioned, it is referred to as the organizational concept from the conventions of the sociotechnical model of work, whose principally focuses on ergonomic matters, the well-being and quality of work life. This model, although was created in an automotive construction environment in 1970 at Volvo (Sweden), is applicable to any company, whether in an industry or a service provider institution, as in the case.

The sociotechnical model proposes to consider reducing the pace work related pressures, granting of autonomy to manage their work and workers' participation in the decisionmaking processes of the company. Therefore, the proposed analysis of work organization in this study uses as its basis the premises of this system, these sociotechnical model concepts and parameters.<sup>14</sup>

The highest level of dissatisfaction in the work organization construct (Figure 3) was related to wage, being represented by 3.2 cm in the scale. The interviewees exposed the fact as follows: "we work a lot and are paid a little" and "we receive a lower wage, and you have to work in two jobs to survive". By presenting several cases of analysis of environment and work conditions, it is shown that, in general, the dissatisfaction with wage is one of the more negative factors regarding quality of life and work satisfaction.<sup>14</sup> In the context of ergonomics, the most important sources of work satisfaction are the physical and psychosocial environments, the working hours, organizational rigidity and remuneration.<sup>14</sup>

In this study, concerning the nursing technicians, a differential was noted. Although the low salary has been reported as an extremely negative factor, several testimonies implied that despite the wage, the level of overall satisfaction is very high. This relates to the motivational theories mentioned before and to human factors, such as the relationship with coworkers and superiors and the good work environment. Many work characteristics, such as autonomy and activity performance, encourage or hinder the personal relationships and work satisfaction, and, in many cases, these tend to override the salary.<sup>15</sup>



Work organization

Figure 3 - Results of the interviews related to work organization.

Given the number of workers who are part of the team, the nursing technicians expressed high levels of dissatisfaction, which is due to the understaffed team and the problems of managing demands in the different work shifts, which could be more equitable, since, in the researchers' perspective, there are shifts with large workloads, while others do not have many. In this case, avoiding disturbing the hospital routine must be regarded as a concern. Quality of work life involves intrinsic (content) and extrinsic (context) aspects of the role. It affects relevant personal and behavioral activities for the individual and group productivity, such as work motivation, adaptability to changes in the work environment, creativity and willingness to innovate and accept change.<sup>16</sup>

The results for the work organization considered more positive were the personal relationships and of work with coworkers and superiors. This perception was expressed as follows: "I have a satisfactory relationship with coworkers and superiors, a good dialogue, respect for others" and "we have the cooperation of coworkers and supervisors". Yet, "we have a great relationship with the coworkers inside and outside the company". When contextualizing work relationships, it is emphasized that positive emotion is important, not only by the pleasant sensation it brings, but also because it leads to a better relationship with the world.<sup>17</sup>

When it comes to work relationships, the manager's role is fundamental, because it provides conditions to expand the workers potentials, regardless of roles or positions. Therefore, it is important to highlight that the relationships between the leader and the team members were identified as relevant factors in facilitating or obstacles of a climate of trust and respect which allows relationships of harmony and cooperation.<sup>18</sup>

## FINAL CONSIDERATIONS

This study aimed to evaluate quality of work life (QWL), under the scope of work satisfaction of nursing technicians active in the hospital environment. The specific objectives were focused on investigating the ergonomic characteristics of work from the perspective of macroergonomic, as well as work conditions related to work role and activities, content and organization.

In general, the ergonomic aspects related to activities and workstations were well evaluated and did not imply any serious biomechanical constraints, both in postural terms and the use of work equipment. It is worth mentioning that the physical elements of work, especially in a hospital environment, unlike an industrial complex, are ease to solve, and in general only depend on small adjustments and flexibility in the workplace.

On the other hand, the ergonomic aspects related to content and work organization presented a different complexity in this environment, being the main complaints the payment and working extra hours. These elements restrict family life, leisure and resting, which leads to health problems both physical and psychosocial framework. Thus, it has implications in quality of life, since it is registered the need for more than one job for maintenance of a decent standard of living.

Finally, it seems that the major contribution of this study has focused on promoting a reflection on the need to improve the working conditions of nursing technicians, especially regarding the necessity to improve quality of work life in order to reflect the outwork environment and the interpersonal and family relationships. From the results it is understood that the levels of satisfaction with work greatly affect the quality of life of these professionals, and this study shows the need to rethink the organizational policies and remuneration of nursing technicians. One of the proposals could be based on a policy of roles and remunerations more compatible with the level of responsibility of these caregivers, who have implicit in their work activities a high degree of complexity and responsibility.

Lastly, it is suggested that more studies be conducted towards a broader sampling, which overcome the case study performed in a single hospital, so it is possible a better intervention and prospecting on the results.

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