

STUDY OF THE PSYCHOSOCIAL VARIABLES IN WORKERS OF THE FURNITURE INDUSTRY

Estudio de las variables psicosociales en trabajadores de la industria de muebles

Estudo das variáveis psicossociais em trabalhadores da indústria de móveis

Original Article

ABSTRACT

Objective: To evaluate the relationship between the works psychosocial variables with professional and sociodemographic aspects of the furniture manufacture workers and the correspondent multidisciplinary intervention. **Methods:** The study sample was composed of 146 workers from the production sector of two furniture industries which was divided in two groups: Group 1 (study) and Group 2 (control). The Group 1 was formed by 80 workers and the Group 2 of 66 workers. The instrument used to assess the common mental disorders was the Self Reporting Questionnaire (SRQ-20) and the Job Content Questionnaire (JCQ) was used to evaluate the psychosocial factors at work environment. **Results:** The results showed significant differences at the “authority of decision” ($p=0,05$), “control over the job” ($p=0,03$) and “physical effort” ($p=0,02$) dimensions when comparing the groups of workers. There were not significant differences in the others variables. **Conclusion:** Comparing both Groups revealed relation between “decision authority”, “decision latitude” and “physical exertion” variables, with the multidisciplinary intervention.

Descriptors: Occupational Health; Workers; Mental Health.

RESUMEN

Objetivo: Evaluar la asociación de las variables psicosociales en el trabajo con aspectos sociodemográficos y profesionales de trabajadores de la industria de muebles y la intervención multidisciplinaria. **Métodos:** La muestra del estudio fue de 146 trabajadores del sector de producción de dos industrias de muebles dividida en dos grupos: Grupo 1 (estudio), Grupo 2 (control). El Grupo 1 fue constituido de 80 trabajadores y el Grupo 2 de 66 trabajadores. El instrumento utilizado para evaluar los trastornos mentales comunes fue el Self Reporting Questionnaire (SRQ-20) y para evaluar los factores psicosociales en el entorno de trabajo se utilizó el Job Content Questionnaire (JCQ). **Resultados:** Los resultados mostraron diferencia significativa en las dimensiones “autoridad de decisión” ($p=0,05$), “control sobre el trabajo” ($p=0,03$) y “esfuerzo físico” ($p=0,02$) al comparar los grupos de trabajadores. No se encontraron diferencias significativas para las otras variables. **Conclusión:** La comparación entre los grupos presentó relación para las variables “autoridad de decisión”, “control sobre el trabajo” y “esfuerzo físico” con la intervención multidisciplinaria.

Descriptores: Salud Laboral; Trabajadores; Salud Mental.

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RESUMO

Objetivo: Avaliar a associação das variáveis psicossociais no trabalho com os aspectos sociodemográficos e profissionais de trabalhadores da indústria de móveis com a intervenção multidisciplinar. **Métodos:** A amostra do estudo foi composta por 146 trabalhadores do setor de produção de duas indústrias de móveis, dividida em dois grupos: Grupo 1 (estudo) e Grupo 2 (controle). O Grupo 1 foi constituído por 80 trabalhadores e o Grupo 2 por 66 trabalhadores. O instrumento utilizado para avaliar os transtornos mentais comuns foi o Self Reporting Questionnaire (SRQ-20) e para avaliar os fatores psicossociais no local de trabalho foi utilizado o Job Content Questionnaire (JCQ).

Resultados: Os resultados mostraram diferenças significativas nas dimensões “autoridade de decisão” ($p=0,05$), “controle sobre o trabalho” ($p=0,03$) e “esforço físico” ($p=0,02$) quando comparado os grupos de trabalhadores. Não foram encontradas diferenças significativas para as outras variáveis. **Conclusão:** A comparação entre os grupos apresentou relação das variáveis “autoridade de decisão”, “controle sobre o trabalho” e “esforço físico” com a intervenção multidisciplinar.

Descritores: Saúde Ocupacional; Trabalhador; Saúde Mental.

INTRODUCTION

Workers' healthfulness is an area of Public Health which comprehends the fields of disease control, work organization and assistance. To attain its ends, it applies diagnosis treatment and illness rehabilitation⁽¹⁾. Moreover, it combines other disciplines skills, say, Social Medicine, Public Health, Occupational Health, Sociology, Epidemiology, Engineering and Psychology, not to mention several others, which, connected to Scientific Knowledge provide new directions in understanding the link between health and work⁽²⁾.

World furniture manufactures, in general, and the Brazilian one, in particular, have suffered radical changes in the last few years. Large scale production has replaced skilled craftsmanship, and the typical small workshop gave place to the large capital industry. The tasks the furniture industry workers are committed to may be risky to the welfare of the latter, since the chain of production, the tools, machinery and equipment may be not properly chosen as regards employees' good health⁽³⁾.

Concerning what is above mentioned; science has long acknowledged the dramatic ties between work and physical illness. It is, however, a recent standing the fact that continuous and uniform work may lead to subtle but serious progressive injury, either bodily or mental⁽⁴⁾.

Besides, occupational diseases are highly frequent in furniture manufacture work posts. In damaging the workers'

well being, those maladies lead to company losses, due to the decrease of skilled labor and workforce which, in turn, result in a product quality decline⁽⁵⁾.

Beyond any doubt, workplace disease causes have many features, environmental factors standing out from others to introduce new methods of health care research, which take workers stress and mental wellbeing into account. Scientific evidence brought to light various factors associated with mental disorder, such as brain hormonal imbalance, personality traits, genetic and situational vulnerability⁽⁶⁾.

Hence, actions taken in favor of workers' health should focus on variables and work processes which take into account the links between health and the whole complexity of work factors. This will require a multidisciplinary and cross-sectional approach. The measurement of risk recognition and control in workplace are esteemed suitable to intervene in occupational health care and perpetually improve health and safety conditions^(2,7).

The aim of this study is, thus, to evaluate the relationship between the works psychosocial variables with professional and sociodemographic aspects of the furniture manufacture workers and the correspondent multidisciplinary intervention.

METHODS

This study is a quasi-experimental research, with cross-temporality, considering the period between September and November 2012, regarding two furniture industries in the City of Ubá, State of Minas Gerais, Brazil.

The research sample took into account 146 workers from the production sectors of both furniture industries. The laborers were divided into two groups: Group 1 (study); Group 2 (control). Group 1 was formed by 80 workers; Group 2, by 66 workers (Illustration 1).

To compute the sample, it was employed the average compare through independent groups, by means of the statistical program EPIDATA 3.1[®] (Análisis Epidemiológico de Datos Tabulados)⁽⁸⁾.

The inclusion criteria were the male workers in the production sector of the Company, who agreed to take part in the research, when presented the consent form, who showed up in the firm by the data collection day. For research purposes, they had to be employed for, at least, six months, with a minimum one-year experience in the furniture branch. Also none must be taking anti-depressants in the considered period, with ages between 20 and 60 years old. Only took part in the investigation workers who showed signs of Common Mental Disorders. To detect the latter, the “Self Reporting Questionnaire” (SRQ-20) was used,

considering a cut-off point of 5/6. Six positive responses indicated the incidence of Common Mental Disorders⁽⁹⁾. If a worker was to be absent due to ill health reasons, by the data collection day, he was to be considered and counted as exclusion criterion.

The SRQ-20 is a tool with the ability to evaluate the neurotic symptoms, such as anxiety, depression, psychosomatic reactions, irritation and mental exhaustion based in a succession of dichotomous responses (yes/no)⁽¹⁰⁾.

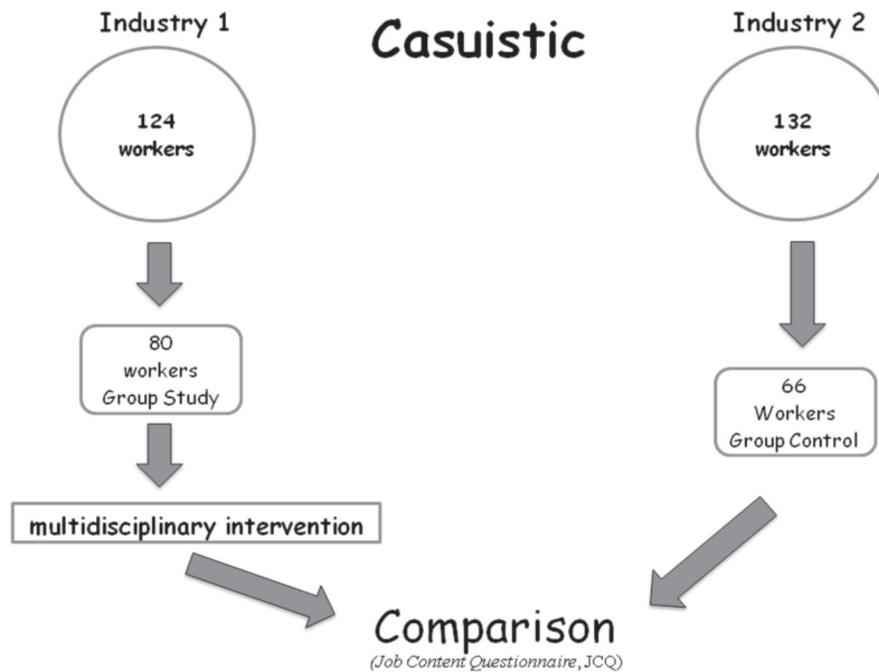


Illustration 1- Model of research.

The *Job Content Questionnaire* (JCQ) is a well-arranged instrument, designed for the evaluation of the existing psychosocial features in the exclusive work environment. Its full accepted version includes 49 questions organized in five separated features⁽¹¹⁾.

The disciplinary guidance took place by means of speeches to the Group 1 employees for the period of a month, in a previous chosen location. It lasted an hour and happened before the working day started. The interdisciplinary team and topics were, as follows: Social Worker (Social Conditions and the Organization of the Family); Nurse (Health Situations in the Working Environment); Physiotherapist (Work Ergonomics); Nutritionist (Health and Nutrition in the Work Space); and Psychologist (Stress and Mental Health).

The evaluated variables were arranged as predictive variables (use of skills, decision-making authority, work control, psychological demand, physical effort, physical force isometric, physical demand, job insecurity, work mate

social support, social support), theoretical model (incidence of Common Mental Disorders and exposure to stress at work); modifier effect variable (disciplinary intervention) and variable of consequence (mental health).

Data analysis employed Statistical Package for the Social Sciences (SPSS) IBM® software, version 20.0.

Categorical variables were subjected to an analysis of the frequency distribution (absolute and percentage). Continuous variables were presented through measurement of central tendency (Mean and Median) and dispersion (Standard Deviation-SD). The *Mann-Whitney* test for independent groups was applied to determine the effect of $p \leq 0,05$ with significance.

This research complied with all the ethical principles of research and was approved by the Ethics Committee and Research Institute, of the Institute of Italian Rosary University - IUNIR, in accordance with the Resolution 466/2012 of the Ministry of Health, with approval and registration of number 08-2012.

RESULT

The group 1 presented average age of 32,67 years (SD \pm 10,17), against 33,73 years (SD \pm 9,75) for group 2. 76,20% (n=80) of Group 1 members were young adult, while 77,30% (n=66) of Group 2 members were all the same young adults.

Both Groups had similar marital status of their members, considered the situation by the cohabitation with a mate. 60,0% (n=80) of the workers in Group 1 had not completed elementary school, while 59,1% (n=66) were in this same situation in Group 2. Table I shows the sociodemographic characteristics of workers in the industries of furniture.

Table I - Demographic characteristics of the workers in the industries furniture. Ubá-MG, 2012.

Sociodemographic characteristics		Group			
		Study (n= 80)		Control (n= 66)	
		n	%	n	%
Instruction	Complete basic and incomplete	48	60.00	39	59.10
	Middle complete and incomplete	24	30.00	24	36.40
	Complete and incomplete superior	8	10.00	3	4.50
Civil status	Without spouse	40	50.00	27	40.91
	With spouse	40	50.00	39	59.09
Age	Young adult	61	76.20	51	77.30
	Adult	19	23.80	15	22.70

Table II - Distributions of variables according to the professional aspects of the workers. Ubá-MG, 2012.

JCQ	Group			
	Study		Control	
	Time in company	Time in the furniture industry	Time in company	Time in the furniture industry
Skill Discretion	0.87	0.39	0.13	0.87
Decision Authority	0.52	0.33	0.21	0.46
Decision Latitude	0.65	0.32	0.04*	0.66
Psychological Job Demands	0.78	0.67	0.16	0.46
Physical Exertion	0.65	0.85	0.63	0.46
Physical Isometric Loads	0.72	0.74	0.99	0.28
Physical Job Demand	0.93	0.80	0.79	0.37
Job Insecurity	0.32	0.01*	0.37	0.35
Coworker Support	0.23	0.82	0.11	0.46
Supervisor Support	0.11	0.08	0.40	0.90

JCQ: Job Content Questionnaire; *Mann-Whitney

Group 1 had presented of 5,81 years (SD \pm 6,15) of working time in the company against 4,80 years (SD \pm 4,31) for Group 2, which introduced relationship for the variable “decision Latitude” ($p=0,04$). Working time in the furniture industry in Group 1 was 10,92 years (SD \pm 9,07) with association with the variable “job insecurity” ($p=0,01$) and an average of 6,94 years (SD \pm 6,14), in the Group 2 (Table II).

Results showed significant differences in the dimensions “decision authority” ($p=0,05$), “decision latitude” ($p=0,03$) y “physical exertion” ($p=0,02$), when both groups of workers for the other variables were compared. No significant differences were found out as regards the remaining variables (Table III).

Table III - Comparative analysis of the variables of the dimensions of the Job Content Questionnaire (JCQ) between workers' groups evaluated. Ubá-MG, 2012.

JCQ	Group (n= 146)								<i>p</i> *
	Study (n=80)				Control (n=66)				
	Mean	SD	Median	Mini-Max	Mean	SD	Median	Mini-Max	
Skill Discretion	33.00	5.47	33.00	16.00-48.00	31.97	4.82	32.00	22.00-44.00	0.11
Decision Authority	31.65	6.47	32.00	12.00-44.00	29.64	6.03	28.00	16.00-44.00	0.05*
Decision Latitude	64.65	10.43	64.00	30.00-92.00	61.61	9.30	61.00	38.00-88.00	0.03*
Psychological Job Demands	32.18	4.33	32.00	22.00-44.00	30.56	5.06	31.00	12.00-42.00	0.08
Physical Exertion	7.45	1.85	7.50	3.00-12.00	8.18	2.13	8.00	3.00-12.00	0.02*
Physical Isometric Loads	4.85	1.37	5.00	2.00-8.00	5.03	1.46	5.00	2.00-8.00	0.54
Physical Job Demand	12.30	2,76	12.00	5.00-18.00	13.21	3.23	13.00	5.00-20.00	0.08
Job Insecurity	7.35	0.97	7.00	6.00-10.00	7.21	1.05	7.00	5.00-9.00	0.46
Coworker Support	11.78	2.02	12.00	4.00-16.00	11.79	2.10	12.00	5.00-16.00	0.88
Supervisor Support	11.04	2.18	11.00	4.00-15.00	10.82	2.07	11.00	7.00-16.00	0.26

SD: standard deviation; JCQ: Job Content Questionnaire; *Mann-Whitney

DISCUSSION

This investigation focused itself in comparing social and psychosocial features affecting production workers of two furniture industries in Ubá.

Regarding workers age, this study's average age was similar to a production line worker research, which found out an average 31,9 years old (SD \pm 8,30)⁽¹²⁾.

Both Groups comprised mainly professional young adults. As for Common Mental Disorders, it was verified a correspondent predominance of young adults among urban workers (55,40%)⁽¹³⁾. Electric sector workers were also preeminently young adults, averagely 36,8 years old (SD \pm 8,00)⁽¹⁴⁾. As for perception main difficulties, the

investigation found out the majority of young adults among the affected furniture industry workers (76,40%)⁽³⁾.

Regarding the presence of spouse variable, both Groups showed equivalent distribution. The study on electric sector workers revealed a greater incidence of married men or either unmarried ones who, nevertheless, lived with a mate⁽⁸⁾. As for this aspect, incidentally, these workers showed higher indexes of absenteeism⁽¹⁵⁾.

Study on inactivity disorders and physical hindrances to the workers' perception found out relations to incomplete elementary education⁽¹⁶⁾.

Working time of the investigated groups was classified considering the period of work in the specific company and the whole period in a furniture industry. Group 1 showed

an average 5,81 years of company work as compared to an average 4,80 years for Group 2. Ergonomic factors show effect in an average 7,3 years⁽³⁾. Thus, research on factors associated to work showed an average 12,8 years of activity in the company⁽¹⁷⁾.

The longer one works in the furniture industry, the greater his stability in the job. This shows how rewarding these experiences can be and in so many aspects, leading to favorable relationships in the professional environment⁽¹⁸⁾. The extension of working time in the same type of professional activity requires periodic monitoring due to the many risks to which workers in the furniture industry are exposed. Hence, when researching duration and benefits, authors point out the length of time in professional activity as a cause of absenteeism and development of occupational diseases, inferring a positive relationship between time and work illness⁽¹⁹⁾.

This investigation found out significant differences as for the variable “decision authority”, when compared Group 1 and Group 2, revealing positive association. Another study on work-related stress, it also describes positive association for the “decision authority” with evaluation of psychosocial factors at work⁽²⁰⁾. When verifying professional and psychosocial features, “decision authority”, say, the ability of decision making at work, showed significant association with the variable “time in the company” and “time in work sector”⁽⁸⁾. Regarding psychological factors, a study on mental health proved deep correlation between nervousness at work and effort-reward imbalance, revealing both indicators measure a similar, but not identical, construct⁽²¹⁾.

Following this reasoning, regarding “decision latitude” that is the possibilities of skill use by workers, the investigation proved there be a positive relation⁽²²⁾. When carefully examined among professional features, the occupation, as a variable, also proved positive association with “decision latitude”. Mental health, for its sake, showed positive association when Common Mental Disorders considered. It proved that the feature is inversely correlated with social support, while directly associated with depression⁽²³⁾.

Research that associated new occurrences to gender, age and training influences, found out no correlation between Groups 1 and 2⁽²⁴⁾.

However, “physical exertion” was positively associated between both Groups. According to research in work on construction and validation of work related stress scale, physical work features were positively related to stress⁽²⁵⁾. In a study comparing, both groups on the effects of gymnastics in work place, showed that all the workers were affected with pain in the pre-stage of the experiment. No significant difference were detected between control

group and experimental one⁽²⁶⁾. Also, a study that linked effort with physical wear identified a significant correlation between the levels of rewards received by workers⁽²¹⁾.

CONCLUSION

Results comparing both Groups revealed relation between “decision authority”, “decision latitude” and “physical exertion” variables, with the multidisciplinary intervention. Therefore, it is important, by means of research, to supply social support to workers.

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