



ORIGINAL RESEARCH PAPER

Psychology

EVALUATION OF PSYCHOSOCIAL RISK FACTORS IN IARE CP USING THE ISTAS 21 (COPSOQ) TOOLS AND PSYCHOSOCIAL RISK ASSESSMENT QUESTIONNAIRE OF THE MINISTRY OF LABOR, 2019

KEY WORDS: Psychosocial risk factors, dimensions, ISTAS 21, Cuestionario de Evaluación de Riesgos Psicosociales del Ministerio de Trabajo del Ecuador

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ABSTRACT
 Psychosocial risk factors are intrinsic to all labor, hence the importance to assess them. There are multiple proven tools to achieve this, however, due to the inherent nature of psychosocial risk factors, establishing a standardized assessment protocol is complex. In this study we appraise the presence of psychosocial risk factors at the IARE CP Institute in Quito, Ecuador in 2019, by applying the short version of the ISTAS 21 CoPsoQ questionnaire and the “Cuestionario de Evaluación de Riesgos Psicosociales del Ministerio de trabajo del Ecuador” questionnaire. The application of the “Cuestionario de Evaluación de Riesgos Psicosociales del Ministerio de Trabajo del Ecuador” yielded a total low risk for psychosocial risk factors of 79% and a total intermediate risk of 21%. There was a trend towards an unfavorable global exposure of 50%, intermediate global exposure of 17% and favorable global exposure of 33% with the application of the ISTAS 21 questionnaire. We conclude that a direct comparison between both tools is not possible due to differences in dimensions and scoring system. They may be used to complement one another.

INTRODUCTION
 The work environment is an important contributor to the worker's welfare. Within a look of risks identified in the workplace, psychosocial risk factors have picked up in recent years and have become a matter of concern for public health and a challenge for the field of occupational health research . The psychosocial risk factors in the workplace are developed through gaps in culture, labor policies and expectations and

especially the social attitude of an organization. The International Labor Organization (ILO) speaks of 5 psychosocial risk groups: environmental and workplace factors, organizational factors, work relationships, job security and professional career development and total workload; This means that psychosocial risk factors reflect the way in which a worker interacts with the environment and demands of work.

If an employee feels that there is no adequate correspondence between the demands of the work and the way in which they are expected to be fulfilled, the worker will feel stress, which according to the Basque Institute of Occupational Health and Safety translates into damages in the physical and mental health of the worker with an increased risk of cardiovascular diseases, gastro intestinal disorders and skin conditions; behavioral alterations and their cognitive and emotional abilities. The worker will experience adversities in interpersonal relationships and the organization will be affected by work absenteeism, lower worker resistance, lower productivity and increased accident rates.

Psychosocial risks concern all work activity; According to the Iceberg study, the jobs that have the worst stress risk indicators are those with direct attention to people.

In Ecuador, studies on the identification and assessment of psychosocial risks in the work environment are scarce and the available literature on the determination of this type of risks extrapolated to the health sector is even smaller despite the "Eradication regulations of discrimination in the workplace", issued by the Ministry of Labor, which indicates that the evaluation of psychosocial risk factors at work is mandatory.

The tools available for intervention and / or evaluation of psychosocial risks are varied. One of the most used is the method Istas21 (CoPsoQ), it is a tool adapted for the Spanish State of the psychosocial questionnaire of Copenhagen that is oriented towards prevention; It is available in three versions, long (used for research purposes, not for risk assessment), medium (for companies with more than 30 workers) and short (for companies with less than 30 workers). On October 23, 2018, the Ministry of Labor of Ecuador presented the first psychosocial risk assessment tool at the national level with the purpose of evaluating the conditions that may cause workers' health conditions in approximately 58 items .

With the background described, the objective of this study is to identify and evaluate psychosocial risks through the application of the Istas21 method (CoPsoQ) short version and the tool of psychosocial risk assessment of the Ministry of Labor at the IARE CP Institute in the 2019 year.

PSYCHOSOCIAL RISK FACTORS

The organization of work and health over time have not been related, if not until when it was shown that worldwide stress causes a high rate of absenteeism in addition to presenting a direct relationship with the development of somatic diseases.

DEFINITION

Psychosocial factors are those characteristics of the labor standards, and above all, of your organization that affect the health of people through psychological or physiological mechanisms (Moncada, Llorens, & Kristensen, 2002, p.14).

These are real risks that can occur in the medium or long term, they can also cause accidents and work-related illnesses.

The Occupational Health and Safety Institute (2010), according to relevance, determined the following psychosocial risks:

1. STRESS

It is a state that is characterized by high levels of excitement and anguish, with the frequent feeling of not being able to cope with the situation (Moncada, Llorens, & Kristensen, 2002, p.14). Among the most common factors of work stress, we have those related to the content and work overload, schedules, control, environment and equipment, organizational culture and functions, interpersonal relationships, family work relationship, contractual security.

2. VIOLENCE AT WORK

Incidents where people are physically or emotionally violated in circumstances related to their work. Violent behaviors are considered: emotional abuse (hostile behaviors), uncivility (rude and disrespectful behaviors), workplace abuse and sexual harassment. Work and sexual harassment as being blunt topics are studied as individual terms (Camacho & Mayorga, 2017).

3. HARASSMENT OR "MOBBING"

Behaviors of psychological violence applied between peers or between superiors with subordinates, whose objective or consequence is to attack dignity and create an intimidating, humiliating or offensive environment (Moreno & Baez, 2010).

4. SEXUAL HARASSMENT

It is any inappropriate conduct of a sexual nature developed in the work environment, which affects the dignity of men or women interchangeably producing an intimidating, hostile or humiliating work environment for the person who is the object of the same (Moreno & Baez, 2010)

5. CONTRACTUAL OR LABOR INSECURITY

Feeling of concern about the existence of work in the future, under control over work, low level of protection against unemployment or discrimination and insufficient remuneration, which has been increased by the economic and global crisis (Moreno & Baez, 2010) .

6. FAMILY-WORK CONFLICT OR DOUBLE PRESENCE

The influence of labor demands in addition to the rethinking of roles within the family organization due to the entrance without distinction of men and women in the world , influence the use of personal time, whether family or individual.

MATERIALS AND METHODS

DESIGN AND SAMPLE

For the determination and evaluation of psychosocial risks at the IARE CP Institute, a descriptive cross-sectional study was designed in which two questionnaires were applied to men and women, under 65 years of age and with at least 6 months in their work in the institution. A total of 28 people were surveyed, including doctors, nurses, nursing assistants, administrative, cleaning and maintenance staff.

Due to the size of the population, the application of sampling techniques was not necessary. All respondents participated voluntarily after being informed of the objectives and importance of the development of this research.

INSTRUMENT DESCRIPTION

The short version of the Istas21 questionnaire (CoPsoQ) was used. This version was chosen as it is designed for self-assessment and awareness in companies with less than 30 workers .

This instrument that allows the evaluation of psychosocial risks has 38 questions distributed in 6 dimensions: psychological requirements; active work and development possibilities; insecurity; social support and leadership quality; double presence and esteem. Each question has 5 answer options (except for question 31 linked to the double presence dimension): never; just sometime; sometimes; many times and always; each of which receives a score from 0 to 4. The sum of the score by dimension is performed and compared with the preset reference scores. This allows the risk to be classified into three groups: green (psychosocial exposure level more favorable to health), yellow (intermediate psychosocial exposure level) and red (psychosocial exposure level most unfavorable to health) Table 1.

TABLE 1. DIMENSIONS SHORT VERSION ISTAS21 (COPSOQ)

Dimension	No. questions	Punctuation	Reference values		
			Green	Yellow	Red
Psychological demands	6		0-7	8-10	11-24
Active work and possibility of development	10		40-26	25-21	20-0
Insecurity	4		0-1	2-5	6-16
Social support and leadership quality	10		40-29	28-24	23-0
Double stalking presence	4		0-3	4-6	7-16
Esteem	4		16-13	12-11	10-0

In addition, the psychosocial risk assessment questionnaire of the Ministry of Labor of Ecuador was used, which consists of 58 questions distributed in 8 dimensions: work load and pace; skills development; leadership; margin of action and control; work organization; Recovery; support and support and other important points. Each question has 4 answer options: disagree; disagree partially agree and completely agree; Depending on the response, a score ranging from 1 to 4 is assigned . Similar to the previously described method, the sum of the score by dimension is performed and compared with reference scores that allow each psychosocial risk dimension to be classified into: risk low, medium or high. Likewise, the scores of each dimension are added in order to assess the general psychosocial risk of the organization.

Table 2.

STATISTIC ANALYSIS

For the processing and analysis of the data collected in the surveys, the statistical program SPSS in its version 25 for Windows of 64bits was used. The descriptive statistical analysis of the data was executed to explore the behavior of the dimensions studied. In the questionnaire of the Ministry of Labor the answers obtained were classified according to the exposure in high, medium and low risk level. In contrast, according to Istas21, they were classified as red (psychosocial exposure most unfavorable to health), yellow (intermediate psychosocial exposure) and green (exposure most favorable for health).

Table 2. Dimensions of the psychosocial risk assessment tool of the Ministry of Labor

Dimension	No. Ask in tas	Punctuation	Reference values		
			Low risk	Medium risk	High risk
Load and work rate	4		13-16	8-12	4-7
Skills Development	4		13-16	8-12	4-7
Leadership	6		18-24	12-17	6-11
Margin of action and control	4		13-16	8-12	4-7
Work organization	6		18-24	12-17	6-11
Recovery	5		16-20	10-15	5-9
Support and support	5		16-20	10-15	5-9
Other important points	24		73-96	49-72	24-48
Overall result	58		175-232	117-174	58-116

RESULTS

A total of 28 workers were surveyed; 29% men and 71% women. 50% of workers range between 25 and 34 years. 86% of employees occupy operational positions and 14% administrative positions. 46% have a third level degree and 4% have only completed basic education. Table 3.

(margin of action and control-4%) and 7 (support and support-4%); and the subdimensions corresponding to 8.6 (double presence - 18%), 8.8 (self-perceived health - 18%), 8.2 (workplace harassment - 11%) and 8.5 (working conditions - 11%). Table 4

TABLE 3. SOCIODEMOGRAPHIC CHARACTERISTICS OF THE STATES

Variable		N	%
Sex	Man	8	29
	Woman	twenty	71
Age	16-24	two	7
	25.34	14	fifty
	35-43	6	twenty-one
	44-52	two	7
	≥53	4	14
Scholarship	Basic	one	4
	high school	two	7
	Technology	10	36
	3 Level	3	46
	4 Level	two	7
Occupation	Administrative	4	14
	Operational	24	86

Once the psychosocial risk assessment questionnaire of the Ministry of Labor of Ecuador was applied, 4 dimensions and 4 subdimensions with high risk were detected. The altered dimensions were: 6 (recovery-18%), 3 (leading-7%), 4

TABLE 4. RESULTS OF THE PSYCHOSOCIAL RISK ASSESSMENT TOOL OF THE MINISTRY OF LABOR

Dimensions	R. Low	R. Middle	R. Alto
D1 Load and work rate	64%	36%	0%
D2 Skills Development	86%	14%	0%
D3 Leadership	57%	36%	7%
D 4. Margin of action and control	64%	32%	4%
D5 Work organization	89%	eleven%	0%
D 6. Recovery	32%	fifty%	18%
D7 Support and support	68%	29%	4%
D8 Other important points	71%	29%	0%
D8.1. Discriminatory harassment	79%	twenty-one%	0%
D8 2. Work harassment	43%	46%	eleven%
D8 3. Sexual harassment	86%	14%	0%
D8 4. Addiction to work	79%	twenty-one%	0%
D8.5. Work conditions	32%	57%	eleven%
D8.6. Double presence (work - family)	43%	39%	18%
D8.7. Work and emotional stability	79%	twenty-one%	0%

D8 8. self-perceived health	46%	36%	18%
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It was observed that in dimension 6 (recovery) women were mostly affected (14.3%) compared to men (3.6%); in ages between 35 and 43 years for women and 25 to 34 years for men. Depending on the level of education, the most affected groups were technologists (14.3%) and those with a basic education level (3.6%). All personnel at high risk in this dimension occupy operational positions.

In sub-dimension 8.6 (double presence) the affected group was only women (17.9%) in ages between 25 and 34, who held operational positions. Third level technologists and professionals were affected by 14.3% and 3.6% respectively. Sub-dimension 8.8 (self-perceived health) shows a predominance of involvement in women (14.3%) between the ages of 25 and 34 who occupy operational positions. Depending on the level of education, the most affected workers were technologists (14.3%) and third- level professionals (3.6%) between the ages of 25 and 34 for both sexes, all of them in operational positions.

According to the results of the Istas21 (CoPsoQ) of the year 2019 in the IARE CP clinic there is a global percentage of 1 50% of most unfavorable psychosocial exposure (red), 17% of intermediate global exposure (yellow) and 33% of psychosocial exposure more favorable (green); the most affected dimensions are: psychological requirements, insecurity and esteem; followed by a double presence Table 5. The administrative staff presents more unfavorable exposure in all the dimensions described above, except for the insecurity where intermediate psychosocial exposure is evidenced. In the operative personnel it is possible to appreciate more unfavorable psychosocial exposure in the dimensions of insecurity and psychological demands and intermediate psychosocial exposure in double presence and esteem. Within the operational area, the cleaning staff is the biggest contributor to the most unfavorable exposure in the psychological demands dimension, while the techniques present greater alteration in the insecurity dimension.

TABLE 5. RESULTS OF THE ISTAS 21 METHOD (COPSOQ)

Dimensions	Score	Colour	Interpretation
D1 Psychological requirements	fifteen	Red	Most unfavorable exposure
D2 Active work and possibility of development	31	Green	Most favorable exposure
D3 Insecurity	8	Red	Most unfavorable exposure
D4 Social support and leadership quality	32	Green	Most favorable exposure
D5 Double presence	5	Yellow	Intermediate exposure
D6 Esteem	9	Red	Most unfavorable exposure

DISCUSSION

The inherent characteristics of psychosocial factors have hindered over time their objectification, evaluation and modification. These are real risks that are difficult to control with a negative effect on the worker's health ; Hence, since June 2017, the Ministry of Labor from Ministerial Agreement 082, "Regulations for the eradication of discrimination in the workplace", indicates in its article 9 the obligation to implement a program of prevention of psychosocial risk in all

enterprises dams and public and private institutions that have more than 10 workers. The bibliographic resources available for the analysis of psychosocial risk at work level in our country are limited considering that, until June 2019 according to the National Institute of Statistics and Census (INEC), 66.8% of the Ecuadorian population of age of working is part of the economically active population (PEA) and that of the total PEA 95.6% are employed. The constant exposure to psychosocial risks translates the worker into physiological and psychological symptoms; 30% of health personnel nationwide experience burnout syndrome and approximately 30% of the population between 40 and 69 years is at risk of cardiovascular disease. Once these factors are considered, the need to evaluate these risks in each workplace is evident in order to take appropriate preventive or corrective measures.

The present work contributes to the progress of scientific knowledge, with information relevant to the type of assessment and evaluation of the two batteries: Istas21 (which favors the worker's conditions) and the psychosocial risk assessment questionnaire of the Ministry of Labor (evaluates objective form to the worker and the work environment); It should be considered that these methodologies depend on the susceptibility of the individual associated to the interactions between work, environment, job satisfaction and conditions of their organization, in addition to the skills, needs, culture and personal situation of work outside the work environment.

Both the ISTAS21 CoPsoQ method and the psychosocial risk assessment tool of the Ministry of Labor have demonstrated utility in the results obtained from its application. However, they are not equivalent as they provide different information about psychosocial risks and do not classify them in the same way; for example, the assessment of double presence in the ISTAS21 CoPsoQ covers 4 questions and places special emphasis on the particularities of daily life within the home away from the reality of working life, on the other hand in the questionnaire of the Ministry of Labor is a sub-dimension consisting of 2 questions and considers interpersonal relationships and the work environment for their assessment. The use of these tools can be complementary depending on the objective of each organization.

With the results obtained, the implementation of a risk prevention and control program in the IARE CP Institute is recommended. The Ministry of Labor has a guide for the implementation of a program consisting of measures for prevention, promotion and education of workers for the identification, evaluation and control of psychosocial risks to safeguard the physical, social and mental well-being of workers; This is an option . However, the psychosocial risk prevention and control program must be adapted to the needs of the organization and its employees; In this case, you should focus on a better management of the economic resources of the company that allows you to save the salaries of all workers monthly; also to promote integration among all those who work in the institution; in allowing workers to allocate a fixed time to pauses between tasks that reduce the physical and mental overload to which they expose them. Multidisciplinary work is important, so it is suggested that the IARE CP Health and Safety Committee seek support from the institution's psychologist to develop the most convenient program.

CONCLUSIONS

- 1.- The psychosocial assessment tool of the Ministry of Labor and the ISTAS21 (CoPsoQ) method are valid for the assessment of psychosocial risk. However, the overall results of psychosocial risk assessment vary widely. In ISTAS21 "red", "yellow" and "green" risks were identified in contrast to the risks identified through the survey of the

- Ministry of Labor, whose overall assessments were of medium and low risk.
- 2.- ISTAS 21 is a European tool that has not been adapted to be carried out in Ecuador, it consists of 6 dimensions, while the tool of the Ministry of Labor of Ecuador has 8 dimensions; therefore, the latter has a greater spectrum of assessment that allows a more complete psychosocial evaluation.
 - 3.- The ISTAS 21 tool does not evaluate the dimensions that correspond to discriminatory harassment; Workplace Harassment; sexual harassment; work addiction; working conditions; labor and emotional stability; and self-perceived health . On the other hand, in the psychosocial risk assessment tool of the Ministry of Labor, aspects related to insecurity are not assessed with the same depth as the ISTAS21 method.
 - 4.- Given the results in our study we suggest the combined application of the two methods previously described for their complementarity.

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INTEREST CONFLICT

It is stated that there was no conflict of interest for the present study.

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