

Psycho social risks noted by oncology workers related to their quality of life

Riesgos psicosociales percibidos por trabajadores oncológicos asociados a su calidad de vida
Riscos psicossociais identificados por profissionais de oncologia associados à sua qualidade de vida

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ABSTRACT

Objective: To analyze the relation between occupational psychosocial risks and quality of life related to health, felt by workers who work in oncology and palliative care units in a region of Chile. **Method:** Cross-sectional analytical study of quantitative approach, in which 110 health workers participated. Research met the ethical requirements of E. Emanuel. **Results:** Participants perceive greater exposure to psychosocial risks in the dimension of psychological demands and double presence. On the other hand, they see better results in the physical health component (\bar{x} : 76.72; SD 9.75) versus the mental health component (\bar{x} : 71.13; SD 6.38). In addition, there are relations with statistical significance, between psychosocial risks and quality of life related to Health ($p \leq 0.05$). **Conclusions:** This study shows that there the perception of psychosocial risks and quality of life are related, when considering the health of workers.

Descriptors: Occupational Hazards; Occupational Health; Nursing; Oncology Nursing; Quality of Life.

RESUMO

Objetivo: Analisar a relação entre os riscos psicossociais do trabalho e a qualidade de vida relacionada à saúde, identificada por profissionais que atuam em unidades de oncologia e cuidados paliativos em uma região do Chile. **Método:** Estudo analítico transversal, de abordagem quantitativa, em que participaram 110 profissionais da Saúde. A pesquisa atendeu os requisitos éticos de E. Emanuel. **Resultados:** Os participantes identificam uma maior exposição a riscos psicossociais na dimensão de demandas psicológicas e presença dupla; por outro lado, notam melhores resultados no componente da saúde física (\bar{x} : 76,72; DE 9,75) versus o componente da saúde mental (\bar{x} : 71,13; DE:6,38). Além disso, há conexão, com estatísticas significantes, entre os riscos psicossociais e a qualidade de vida relacionada à Saúde ($p \leq 0,05$). **Conclusões:** O presente estudo permite afirmar que há uma conexão entre a percepção de riscos psicossociais e a qualidade de vida relacionada com a saúde dos profissionais.

Descritores: Riscos de Trabalho; Saúde no Trabalho; Enfermagem; Enfermagem Oncológica; Qualidade de Vida.

RESUMEN

Objetivo: analizar la relación entre riesgos psicosociales laborales y calidad de vida relacionada con salud, percibida por trabajadores que se desempeñan en unidades de oncología y cuidados paliativos de una región de Chile. **Método:** estudio analítico transversal de abordaje cuantitativo, en el cual participaron 110 trabajadores de salud. La investigación cumplió con los requisitos éticos de E. Emanuel. **Resultados:** los participantes perciben mayor exposición a riesgos psicosociales en la dimensión demandas psicológicas y doble presencia, por otra parte, perciben mejores resultados en el componente de salud física (\bar{x} : 76,72; DE 9,75) versus el componente de salud mental (\bar{x} : 71,13; DE:6,38). Además, existen relaciones con significancia estadística, entre riesgos psicosocial y calidad de vida relacionada con Salud ($p \leq 0,05$). **Conclusiones:** este estudio permite afirmar que hay una relación entre la percepción de riesgo psicosocial y calidad de vida relacionada con salud de los trabajadores.

Descriptorios: Riesgos Laborales; Salud Laboral; Enfermería; Enfermería Oncológica; Calidad de Vida.

INTRODUCTION

In 1984, the International Labor Organization (ILO) together with the World Health Organization (WHO), at the ninth meeting on Occupational Medicine agreed that psychosocial factors at work are those that, on the one hand, emerge from the interaction between work, the environment, satisfaction with work and organizational conditions; and, on the other, the worker's abilities, needs, culture and personal conditions⁽¹⁾. Moreover, the perception of well-being of health professionals is influenced by how they perform and how their activity affects their perception, which can be attenuated or impacted by factors associated with the ways of doing and being at work⁽²⁾.

In the case of health professionals who provide care to people with oncological pathologies, these workers need availability to deliver care in a continuous, integral and professional way, with broad theoretical knowledge and with love for their daily tasks⁽³⁾. The demands of their work derive from the need to increase knowledge and develop specific skills associated with current technological requirements. However, not all health personnel have formal training, so they must develop these specific skills based on the experience acquired during the activities they perform⁽⁴⁾. Within the roles of health personnel there are elements that could negatively influence their health, which could trigger psychosocial risks. They are understood as working conditions that cause hazards or working conditions that do not fully use the capacities of health workers⁽⁵⁾.

Some examples are: the chemical risks related to the delivery of oncological care are specifically cited, with focus on those related to storage, transportation⁽⁶⁾ and administration of cytotoxic drugs; substances that are used to cause cell damage and are not selective for tumor cells, which could have adverse toxic effects⁽⁷⁾, during the reconstitution processes of lyophilized drugs, dilution of these in the serum, administration to patients, handling of body fluids (vomit, excreta) and cleanliness of the place in contact with these residues⁽⁸⁾. All the mentioned factors require that health workers adopt quality standards at the time of care delivery. Another example are emotional demands, such as helping users and their families express emotions, in the stage of diagnosis and initiation of treatment, accompanying patients throughout the process and having to accept that, in some cases, they will die soon. Thus, these workers must modify their actions from a curative perspective to a palliative and integrative attitude of the patient's environment (family and close friends)⁽⁹⁾. These conditions can be physically and emotionally exhausting for health professionals⁽⁹⁾ and threaten their personal balance, especially for those who care for young people with oncological diseases, given they witness the little effectiveness in alleviating the suffering of patients and dealing with the death situation⁽¹⁰⁾.

Unfavorable psychosocial conditions are the origin and result of certain inappropriate attitudes and behaviors. They alter the perception of physical, psychological and social well-being⁽¹¹⁾, and favor or affect work performance⁽¹²⁾, which could influence performance and Health-Related Quality of Life (HRQoL) of health professionals.

HRQoL is defined as the level of physical, psychological and social wellbeing that emerges from the evaluation performed

by workers in the different domains of their life, considering the impact these factors have on their health status⁽¹³⁾. Some experts affirm that this concept is subjective, multidimensional, varies in time, and includes positive and negative aspects. In the HRQoL, the perceptions and expectations of the health-disease process also influence, varying in each person depending on their experiences, beliefs and expectations. It also groups internal elements that are part of the individual and external elements that are those that interact with the individual and that may eventually change their health status⁽¹⁴⁾. In recent years, the number of people with oncological pathologies increased, which makes it necessary to improve new technologies, develop more specialized care, and investigate how these aspects influence health workers. In Chile, there are no studies relating psychosocial factors and the health-related quality of life in health professionals who provide care in oncological units. Thus, the question: Is there any relation between the perception of psychosocial risks and the health-related quality of life of workers who provide care in oncology and palliative care units?

OBJECTIVE

To analyze the relation between occupational psychosocial risks and health-related quality of life felt by health professionals working in oncology and palliative care units in a region of Chile.

METHOD

Ethical aspects

Participants were chosen freely, individually and voluntarily, after signing an informed consent ensuring respect for the ethical principles of E. Emmanuel⁽¹⁵⁾. Research was approved by the directors of each participating hospital, the Ethics-Scientific Committee of the *Universidad Católica del Maule* and the Ethics-Scientific Committee of the Maule Health Service (*Servicio de Salud del Maule*).

Study design

An analytical-transversal study with a quantitative approach was carried out⁽¹⁶⁾.

Study population

A total of 110 workers (doctors, nurses, nursing assistants, administrative staff and other professionals) of Oncology in a region of Chile were interviewed from January to October 2016. 91.6% of the total population met the inclusion criteria and agreed to participate in the study. 8.4% (10 people) did not meet the inclusion criteria or refused to participate in the study.

The inclusion criteria for this study were the following: work in an oncology and/or palliative care unit, and freely and informally accept to participate in the study, by signing an informed consent (I.C). On the other hand, exclusion criteria were the following: workers who presented a medical license, legal holiday or administrative permission during the period of data collection.

Study protocol

For data collection, an instrument divided into three parts was used. *Part I*: a biosocial and demographic background questionnaire, prepared for this study, which included variables such as sex, age, current partner situation, consultations with a physician in the last twelve months, submission of a medical license in the last twelve months, and a diagnosed health problem. *Part II*: Questionnaire to evaluate psychosocial risks SUSESO ISTAS 21 brief version, adapted and validated in Chile in 2008⁽¹⁷⁾. In relation to internal consistency, it was reported with Cronbach's Alpha by dimension, and in the test-retest analysis all correlations were statistically significant. The questionnaire is for public use in Chile, and is made of 20 questions that use Likert scale, each item has 5 answer options, with a score of 0 to 4 points, a higher score indicating a higher risk in that dimension. This means that a "low" score shows the most favorable level of risk exposure for health workers and "high" is the opposite and classifies the results in high, medium and low. They are distributed in five dimensions: a) psychological demands; b) active work and skills development; c) social support in the company and quality of leadership; d) compensation and e) double presence⁽¹⁸⁾. *Part III*: Questionnaire SF36 v2 (Short Form Scale 36), to assess the health-related quality of life. This questionnaire is validated and standardized in Chile with Cronbach's Alpha of 0.79⁽¹⁹⁾, which evaluates aspects of the quality of life in the adult population (over 14 years old), with two summary measures: Physical Health Components (PHC) and Mental Health Components (MHC), each being integrated by four dimensions. As for CPH: a) physical function; b) physical role; c) body ache; and d) general health; CSM: e) vitality; f) social function; g) emotional role; and h) mental health. They are qualified with scores ranging from 0 to 100. Scores close to one hundred represent a better perception of health-related quality of life. Scores close to one are represent a worse perception⁽²⁰⁾.

Analysis of results

Once data were collected, they were typed and organized in Microsoft Excel® 2016 program. For later analysis, data were exported to SPSS® program version 18 for Windows XP. The normality of data was calculated using the Kolmogorov-Smirnov test (K-S). After that, an exploratory analysis of data was carried out by means of descriptive statistics, frequency tables, measures of central tendency and measures of dispersion were used. In addition, Pearson's correlation was used to analyze the relation between the dimensions of the SUSESO ISTAS questionnaire and the dimensions of the SF36 v2.

RESULTS

The average age of participants was 38 years old (S.D.: 11.66), ranging from 22 to 65 years old. In relation to the distribution by

sex, 75.5% were women. Regarding their situation in a relationship, 73.6% answered they had one and regarding the aspects related to health, 68.2% said they had consulted a doctor in the last twelve months, reporting musculoskeletal disorders (12.6%) as the main cause; 34.7% consulted a doctor for other causes, such as: preventive health controls, dermatological, ophthalmological, gynecological and odontological. Finally, 48.2% presented a medical license in the last twelve months and 35.6% stated that they have a diagnosed health problem.

Table 1 - Level of Perception of psychosocial risks felt by health professionals participating in the study - Maule Region, Chile, 2016 (N=110)

Dimensions of SUSESO ISTAS 21	f	%
Psychological demands (\bar{x} :11.24; S.D.=3.06)		
Low (0-8)	21	19.1
Medium (9-11)	40	36.4
High (12-20)	49	44.5
Active Work and Skills Development (\bar{x} :5.66; S.D.=2.48)		
Low (0-5)	53	48.2
Medium (6-8)	42	38.2
High (9-20)	15	13.6
Dimension of Social Support and Quality of Leadership (\bar{x} :5.34; S.D.=3.05)		
Low (0-3)	35	31.8
Medium (3-5)	40	36.4
High (7-20)	35	31.8
Dimension of Compensations (\bar{x} :3.70; S.D.=2.51)		
Low (0-2)	34	30.9
Medium (3-5)	50	45.5
High (6-12)	26	23.6
Dimension of Double Presence (\bar{x} :3.23; S.D.=1.90)		
Low (0-1)	22	20
Medium (2-5)	39	35.5
High (4-8)	49	44.5

Table 1 presents results concerning the perception of psychosocial risks of health professionals participating in the study. High percentages of psychosocial risks perception can be seen in some dimensions, such as the psychological demands and the double presence. On the other hand, the compensation, social support, and quality of leadership dimensions the medium risk prevailed. As for the active work and development of skills dimensions, the perception of low risk stands out with a greater percentage.

Table 2 shows the Health-Related Quality of Life (HRQoL) aspects. The participants exceed 50 points in the (PHC) in the physical function, physical role, body ache, general health. In the MHC, the same happens for the dimensions of vitality, social function, emotional role, and mental health. Specifically, the dimensions with the lowest results in the physical health component (PHC) are general health, physical role, and body ache; in the mental health component (MHC), they correspond to the dimensions of mental health and vitality, both with little variability in their results.

It can be observed that there are statistically significant associations between the dimensions of psychosocial risks and most dimensions of HRQoL (See Table 3). Workers who are exposed to greater psychological demands (cognitive, emotional and sensory), have a lower HRQoL perception in the physical health component, as well as in its dimensions (physical function, physical role, body ache and general health).

Table 2 - Level of Perception of Health-Related Quality of Life divided into dimensions felt by health professionals participating in the study - Maule Region, Chile, 2016 (N=110)

	Average	SD	Minimum	Maximum	P25	P50	P75
Physical Health Component	76.72	9.75	66.7	100	71.66	78.96	83.33
Physical function	93.30	9.27	66.7	80.0	90	96.67	100
Physical role	73.41	10.40	20.0	100	70	80	80
Body ache	75.27	18.56	20.0	83.33	70	80	90
General Health	64.88	12.01	33.33	90.83	56.66	63.33	76.66
Mental Health Component	71.13	6.38	49.17	85.0	63.47	71.13	75.38
Vitality	64.18	8.53	40.0	100.0	60	65	70
Social function	80.09	16.11	50.0	100.0	70	80	100
Emotional role	84.97	16.37	40.0	84.0	78.33	90	100
Mental health	55.27	8.04	36.0	85.0	52	56	60

Table 3 - Relation between the dimensions of psychosocial risks and health-related quality of life of health professionals participating in the study - Maule Region, Chile, 2016

	SF-36										SUSESO ISTAS – 21					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1		.743**	.622**	.880**	.775**	.397**	-.121	.399**	.367**	.242*	-.303**	-.228*	-.178	-.196*	-.370**	
2			.328**	.582**	.457**	.242*	-.103	.258**	.199*	-.043	-.232*	-.066	-.115	-.018	-.203*	
3				.355**	.351**	.390**	-.232*	.324**	.449**	-.078	-.206*	-.216*	-.146	-.149	-.216*	
4					.557**	.246**	-.004	-.300**	-.216*	-.208*	-.263**	-.194*	-.085	-.157	-.321**	
5						.382**	.775**	.360**	.346**	.382**	-.220*	-.202*	-.231*	-.251**	-.363**	
6							.397**	.693**	.749**	.134	-.180	-.081	-.025	-.034	-.254**	
7								-.300**	-.216*	.331**	.120	.115	.173	.121	.153	
8									.379**	-.257**	-.118	-.137	-.176	-.142	-.240*	
9										-.186	-.346**	-.091	-.022	-.057	-.271**	
10											.244*	.080	.134	.166	.064	
11												.122	.252**	.006	.129	
12													.091	.212	.160	
13														.372**	.143	
14																.201*

Note: * $p \leq 0,05$; ** $\leq 0,01$

1: PHC; 2: Physical Function; 3: Physical Role; 4: Body Ache; 5: General Health; 6: MHC; 7: Vitality; 8: Social Function; 9: Emotional Role; 10: Mental Health; 11: Psychological demands; 12: Active work and skills development; 13: Social support and leadership; 14: Compensations; 15: Double presence

In the dimension of the emotional role of HRQoL, there is a significant negative relation with psychological demands. That is, those workers exposed to greater psychological demands note a reduction in the time dedicated to their work and to the performance of tasks; they do less than they would have wanted and with less care than the usual items that assess the emotional role. On the other hand, a positive correlation with statistical significance is obtained between the psychological demands and mental health dimensions.

Moreover, there is a significant negative correlation between active work and skill development (dimension that includes aspects such as the influence of workload, the possibility of taking breaks and learning new things). In the PHC, the relation is between the dimensions of physical role, body ache, and general health, except for physical function in which the relation has no statistical significance. It is observed that in the dimension of

compensations, professionals who identify a greater risk regarding insecurity in their work contract, characteristics of work, lack of recognition, and lack of support from peers and superiors, have a low perception in the PHC of health-related quality of life. In addition, those professionals who are concerned about the responsibilities of their home and family (double presence), perceive a low health-related quality of life in the PHC and all its dimensions (physical function, physical role, body ache and general health). This also occurs in the MHC, and in the social function and emotional role dimensions, in which domestic concerns pose health problems, reduce the usual social life and work performance of professionals.

The dimension of general health of HRQoL is closely related to all dimensions of psychosocial risks (psychological demands, active work and skills development, social support and quality of leadership, compensations, and double presence).-

DISCUSSION

This study is one of the first to relate Psychosocial Risks (PSR) and Health-Related Quality of Life (HRQoL) in the oncology and palliative care population in Chile. The results show that there are associations of great importance for the analysis of the work context of these health professionals. These associations are detailed below.

Regarding the perception of psychosocial risks, the results obtained in research match with other hospital studies conducted in Latin America (Brazil, Argentina, Chile), in which health professionals perceived a greater psychosocial risk in the dimensions of *psychological demands and double presence*^(10,12,21-22). The care of people with pathologies of long treatments, that generate collateral effects, periods of family mourning and the death of users could be a source of physical and emotional exhaustion⁽¹⁰⁾ for the health team. The model by Karasek and Theorell⁽²³⁾, affirms that exposure to high psychological demands and little control predicts risk of illness. The psychic tension sustained over time can have repercussions on mental health problems⁽²⁴⁾, which is even worse when there is low social support. On the other hand, Argentine authors report that concerns about family responsibilities and tasks at home (double presence) are generating risks in a group of female workers, where household responsibilities mainly fall on women^(2,12), most of whom experience frustration due to less attention given to their family⁽²⁵⁾. These characteristics could explain the result obtained since this group of workers have a non-flexible schedule, making it difficult to participate in social and family activities.

Authors point out that workers are part of a social system, where the difficulties of work can affect the family nucleus, and family problems interfere in their work performance. This could imbalance the social system, decreasing their HRQoL, especially among women professionals⁽²⁵⁾.

As for HRQoL, the results match the findings of other studies in a healthy population. The scores obtained are favorable in all the dimensions of the SF36v2 questionnaire. The *Physical Health Component* (PHC) reports better results than the *Mental Health Component*, in accordance with what is reported by studies with healthcare workers from Spain⁽⁵⁾. The results found within the general population of Chile are also similar⁽¹⁸⁾. According to Cox⁽²⁶⁾, the demands of work could lead to behavioral changes related to health, such as the consumption of tobacco, alcoholic beverages, psychological changes such as irritability and alterations in memory and attention.

The dimension of physical function obtained the highest scores in comparison with the other dimensions that make up the physical health component. This corresponds to other studies such as the one carried out with health workers in Spain⁽⁵⁾; the diagnosis of the health profile of beneficiaries of the health system in Chile⁽¹⁸⁾; and research carried out with Cuban health workers⁽²⁷⁾. It is emphasized that this study was conducted in a healthy population, who work actively. This is why their health is expected not to impose physical limitations and to allow activities such as bathing and mobilizing patients, load medical carts and make moderate efforts for good performance.

On the other hand, in the Mental Health Component (MHC) the dimensions with the lowest score are that of vitality, which is related to energy and tiredness, and the mental health related to emotional control and depression. These results are in line with what has been shown by Spanish, Chilean and Colombian researchers^(5,19,28), who mention that when workers are more tired they become less alert, have slower reactions to changes in their patients' status and are more exposed to mistakes, which translates into risks for patients, health professionals and the institution, with the increase in costs.

The professionals who participated in this study perceive greater psychosocial risks in the dimensions of psychological demands and double presence. Both are significantly related to most of the dimensions of HRQoL, which proves that the work environment can affect their health-related quality of life and relates to work absenteeism. The mentioned factors find support in an important percentage of health professionals who present a medical license. In addition, studies conducted in Brazil and the European Union report that negative work conditions impact worker's well-being⁽⁵⁾, causing dissatisfaction⁽²⁹⁾, lower performance and absenteeism⁽²⁶⁾.

As for the *perception of general health*, it is the only dimension of HRQoL that is negatively related to all other dimensions of psychosocial risks. This shows that health professionals with a greater perception of high risks at work believe their health conditions may worsen. Brazilian researchers state⁽¹⁰⁾ that caring for people with oncological pathologies expose health professionals to situations that create burnout conditions. Some examples are functional and organizational aspects, such as the physical environment in which activities are performed, workload and situations related to emotional aspects, e.g., facing the pathology and the death of patients and attending their families throughout the grieving process, which menaces their perception of well-being.

Study Limitations

The generalization of results to private institutions is complex, since they have different labor contexts. Moreover, the geographic location of the participating institutions delayed the data collection time.

Contributions to the Nursing field

The need for programs designed to develop and promote the health of health professionals working in Oncology Units is highlighted, in order to increase their Health-Related Quality of Life (HRQoL) and reduce Psychosocial Risks (PSS). Given empirical evidence reflects that better HRQoL means better delivery of care, the same is true for a decrease in PSR.

CONCLUSION

Health professionals working in Oncology Units perceive psychosocial risks, specifically in the dimensions of psychological demands and double presence. In addition, associations were found between the perception of psychosocial risks and

health-related quality of life. The demands of performance with people with oncological pathologies impact on the perception of mental health of health professionals.

Knowing the psychosocial factors that affect the health and well-being of health professionals allows developing strategies that reduce stress and tension, creating a better perception of HRQoL.

Finally, further research and intervention programs concerning occupational risks are needed to improve the HRQoL of health professionals, and therefore obtain better productivity and quality of health care.

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