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El clima organizacional y su relación con el burnout en el laboratorio clínico

Organizational Climate and its relation with Burnout Syndrome in a Clinical Laboratory

O clima organizacional e sua relação com o burnout no laboratório clínico

Luis Daniel Bernal Albarrán
Instituto de Salud del Estado de México, México
polikdany@gmail.com
https://orcid.org/0000-0002-1622-3263

Manuel Donovan Chávez Tiscareño
Instituto Mexicano del Seguro Social, México
skankin20@hotmail.com
https://orcid.org/0000-0002-2283-6453

Resumen

Un clima organizacional desfavorable, así como la presencia del síndrome de *burnout* desencadenan dif erentes trastornos en la salud, de ahí la importancia de conocer su situación en el lugar de trabajo. En ta l sentido, se realizó un estudio retrolectivo, transversal y de asociación para determinar la relación del c lima organizacional y el *burnout* en el personal del laboratorio, pues en este contexto son escasas las in vestigaciones en torno al análisis de esas variables. La población estuvo conformada por 20 laboratorist as y 9 químicos de un hospital público de segundo nivel. Se encontró que hay un clima desfavorable, p ues 25 personas presentaron niveles medios del síndrome, mientras que otras 2 tuvieron niveles altos. E n consecuencia, se determinó una relación negativa, moderada y significativa entre la realización perso nal y el clima organizacional, lo cual impacta en los niveles de cansancio emocional, en la despersonali zación y en la disminución de la satisfacción laboral.

Palabras clave: clima organizacional, laboratorio clínico, laboratoristas, químicos, síndrome de burn out.

Abstract

An unfavorable organizational climate as well as the presence of burnout syndrome can trigger differen t important health disorders, hence the importance of knowing the conditions in which the workplace is located. Besides, the study of this variables in the clinical laboratory is limited. A retrospective, cross - sectional, and association study was conducted with the objective of determining the relationship betw een organizational climate and burnout syndrome in the clinical laboratory personnel. The population c onsisted of 20 clinical laboratory workers and nine chemists. It was found that there is an unfavorable c limate where 25 people present average levels while another two levels high burnout syndrome. A nega tive, moderate and significant relationship between personal achievement and the organizational climat e was determined; on the other hand it was concluded that when an unfavorable organizational climate i s perceived there are higher levels of emotional exhaustion and depersonalization; and decreases job sat isfaction.

Keywords: Burnout syndrome, clinical laboratory workers, clinical laboratory, chemists, organization al climate.

Resumo

Um clima organizacional desfavorável, assim como a presença da síndrome de burnout, desencadeiam diferentes agravos à saúde, daí a importância de se conhecer sua situação no ambiente de trabalho. Nest e sentido, um estudo retrolective, transversal e de associação foi conduzido para determinar a relação e ntre clima organizacional e burnout em pessoal de laboratório, pois neste contexto é pequena pesquisa s obre a análise destas variáveis. A população foi composta por 20 técnicos de laboratório e 9 químicos d e um hospital público de segundo nível. Verificou-se que existe um clima desfavorável, uma vez que 2 5 pessoas apresentaram níveis médios da síndrome, enquanto outras 2 apresentaram níveis elevados. C onsequentemente, determinou-se uma relação negativa, moderada e significativa entre a realização pess oal e o clima organizacional, o que impacta nos níveis de exaustão emocional, despersonalização e redu ção da satisfação no trabalho.

Palavras-chave: clima organizacional, laboratório clínico, laboratoristas, produtos químicos, síndro me de burnout.

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Introduction

The burnout syndrome, a concept coined for the first time in 1974 by Freudenberger, is a psychological state that arises due to a constant exposure to stress factors (Carrillo-Esper, Gómez-Hernández and Espinoza, 2012; Maslach and Leiter, 2016), and it is characterized by three dimensions: emotional exhaustion, depersonalization and low performance at work (Wurm et al., 2016). Emotional fatigue is related to the decrease of emotional resources and the feeling that nothing can be offered to other people; Depersonalization involves negative and insensitive attitudes towards service recipients, and low performance at work is linked to the set of negative responses towards oneself and towards work (Castillo, 2001).

On the other hand, the construct organizational climate has its origin in Lewinian psychology, although it was Gellerman who introduced it to work in the 60s of the last century (Arias and Arias, 2014). It is defined as the perceptions that workers have in relation to activities, procedures and policies related to the work environment. This is considered as a dynamic and short-term factor (Bustamante-Ubila, Grandón and Lapo, 2015), and there are multiple variables that comprise it, such as leadership, motivation, retribution and participation (Segredo, 2013; Serrate, 2014).

The above means that conditions in the workplace can contribute to employees triggering health problems. For example, obesity has been linked to night shifts, extended working hours, stress and job insecurity. Also, the physical inactivity during the day has been linked to a decrease in the capacity for decision making, while smoking has been associated with high demands at work (Miranda, Gore, Boye r, Nobrega and Punnett , 2015). Likewise, some noncommunicable diseases such as diabetes, cardiovas cular disorders and cancer have been related to lifestyle, inadequate diet, work environment and work s tress (Jorgensen, Villadsen, Burr, Punnet y Holtermann, 2016).

However, within occupational risks of a psychosocial nature, the burnout syndrome occupies an important place, since it is one of the main consequences that arise due to a deterioration in working conditions (Del Valle and Vuano, 2007). In fact, in an organization where there are symptoms of burnout there is a risk that there will be a contagion effect among the staff (Martins, Teixeira, Carvalho and Hernández-Marrero, 2016). For these reasons, it is essential to analyze the organizational climate, as well as the burnout syndrome present, in this particular case, in the staff of the clinical laboratory of a public hospital, because in this context there are few studies on the analysis of these variables. .

The importance of this type of inquiry lies in the fact that the results that can be gathered can he lp to know and understand not only the behavior of each one of the members of an institution, but also t he perceptions of them in relation to the place where they work (Pecino-Medina, Mañas-Rodríguez, Dí az-Fúnez, López-Puga and Llopis-Marín, 2015). The study of the organizational climate, therefore, is a n administrative tool that can serve as a support to make corrective or preventive decisions (Zenteno-Hi dalgo and Duran, 2016). At present, leadership - one of the dimensions of the work climate - is being in vestigated by sociologists, political scientists, philosophers, psychologists and management theorists; b ut in the next 50 years this study will also be carried out by geneticists, biologists, engineers and chemi sts (Serrano y Portlanza, 2014).

Method

Below are some methodological specifications followed in this investigation:

- *Type of study: Observational, transversal, association.*
- *Type of sampling: Non-probabilistic, by quotas. Clinical laboratory staff of a second level public hospital (29 workers).*
- *Inclusion criteria: Operative personnel of the clinical laboratory that agrees to answer the questionnaire.*
- *Exclusion criteria: Worker who is on vacation and refuses to participate in the study.*
- *Hypothesis: If the worker is in an inadequate organizational climate, there is a possibility that he or she will have a burnout syndrome.*
- *Independent variable: Dimensions of the organizational climate.*
- *Dependent variable: Burnout syndrome.*

Instruments

Organizational climate (questionnaire about my work)

The instrument used (consisting of a series of questions) was created by the Pan American Heal th Organization (PAHO), which has been tested and studied previously, hence it is considered valid and reliable, and has been used in different investigations on the organizational climate (Serrate, 2014). In t he instrument, four variables were defined with their respective subvariables (table 1):

Tabla 1. Variables y subvariables del clima organizacional

Variable	Subvariables
Liderazgo	Dirección, estímulo a la excelencia, estímulo del trabajo en equip o, solución de conflictos.
Motivación	Realización personal, reconocimiento de la aportación, responsa bilidad y condiciones de trabajo.
Reciprocidad	Aplicación al trabajo, cuidado del patrimonio institucional, retribuc ión, equidad.
Participación	Compromiso por la productividad, compatibilización de intereses, intercambio de informaciones, implicación en el cambio.

Fuente: Elaboración propia

The measurement for the qualification was established on a nominal scale. The items are dichotomous, so the response that reflected the positive climate took the value 1, while the response that expressed the negative climate took the value 0.

In the interpretation of the results the scores of the questions of each subvariable were added, w hich served to obtain an average that oscillated between 0 and 5. In this way the following value scale was established in the analysis of the results:

- Completely unfavorable: between 0 and 1.5
- Unfavorable: between 1.6 and 2.5
- Moderately favorable: between 2.6 and 3.5
- Favorable: between 3.6 and 4.5
- Very favorable: between 4.6 and 5.

Burnout syndrome (Maslach Burnout Inventory questionnaire)

The Spanish version of the instrument developed by Maslach and Jackson was used, which cons ists of 22 items, with a Likert scale of 7 points (Aranda, Pando and Salazar, 2016). Next, the criteria stu died are presented:

1. Emotional exhaustion
   - High: 27 or more points.
   - Intermediate: 19 and 26 points.
   - Low: less than 19 points.
2. Depersonalization:
   - High: 10 or more points.
   - Intermediate: between 6 and 9 points.
   - Low: less than 6 points.
3. Decrease in personal fulfillment
   - Low: score between 0 and 33.
   - Intermediate: between 34 and 39.
   - High sense of achievement: more than 40 points.

In the study it was considered that MBI scores are low between 1 and 33. High scores in the first two and low in the third define the syndrome.

For the application and qualification of the instruments, we counted on the advice of trained psy chologists outside the hospital, so that the study population was not predisposed to think about reprisal.

Results

The results obtained are shown in the following tables and figures.

Tabla 2. Variables sociodemográficas y laborales agrupadas por presencia o ausencia del síndrome de *burnout*

V NSB	SEXO		EC		NE		P		TURNO				ENF		RE		ANT	
	F	M	S	C	L	B	LB	Q	MT	V	G	F	SI	NO	<35	>35	>10	<10
A	2	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1
M	13	12	17	8	16	9	17	8	13	3	7	2	8	17	9	16	16	9
B	1	1	2	0	0	2	2	0	1	0	1	0	1	1	0	2	2	0
Total	16	13	20	9	17	12	20	9	15	3	8	3	10	19	10	19	19	10

V: Variable sociodemográfica y laboral, NSB: Nivel de síndrome de *burnout*, B: Bajo, M: Moderado, A Alto, EC : Estado civil, NE: Nivel de estudios, P: Puesto, ENF: Enfermedad, RE: Rango de edad, ANT: Antigüedad, F: Femenino, M: Masculino, S: Soltero, C: Casado; B: Bachillerato, LIC: Licenciatura, Q: Químico, LB: Laboratorista, MT: Matutino, V: Vespertino, G: Guardia, FD: Fin de semana, RE: Rango de edad en años.

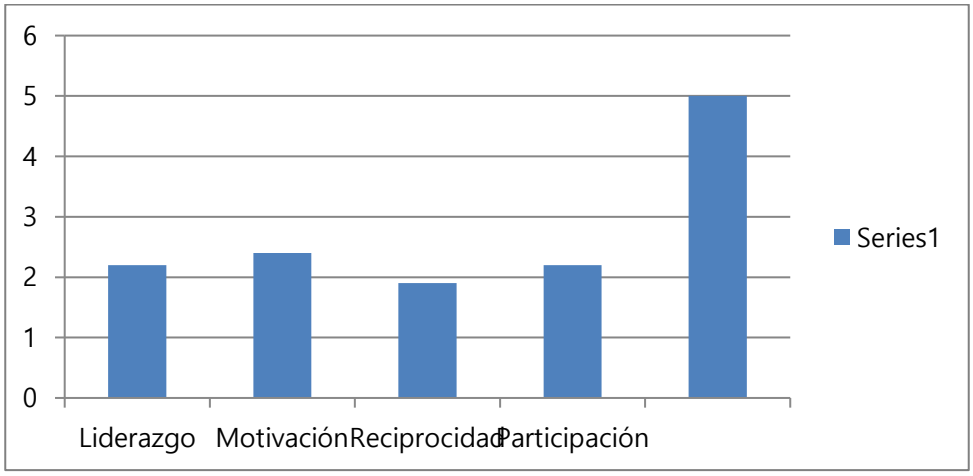
Fuente: Elaboración propia

Tabla 3. Frecuencia de puntuaciones del síndrome de *burnout* en el personal del laboratorio clínico

Dimensión del síndrome de *burnout*	Puntuaciones bajas	Puntuaciones medias	Puntuaciones altas
Agotamiento emocional	25	4	0
Despersonalización	23	1	5
Realización en el trabajo	10	9	10

Fuente: Elaboración propia

Figura 1. Valores de las dimensiones del clima organizacional en el laboratorio clínico de un hospital público de segundo nivel



Totalmente desfavorable: 0-1.5; desfavorable: 1.6-2.5; medianamente favorable: 2.6-3.5; favorable 3.6-4.5; muy favorable 4.6-5. Fuente: Elaboración propia

Tabla 4. Variables sociodemográficas agrupadas por percepción del clima organizacional

V CO	**SEXO**		**EC**		**NE**		**P**		**TURNO**				**ENF**		**RE**		**ANT**	
	F	M	S	C	B	L	Q	LB	MT	V	G	F	SI	NO	<35	>35	>10	<10
F	1	5	6	0	3	3	2	4	4	0	0	2	1	5	2	4	5	1
DF	15	8	14	9	9	14	7	16	11	3	8	1	9	14	8	15	14	9
Total	16	13	20	9	12	17	9	20	15	3	8	3	10	19	10	19	19	10

V: Variable sociodemográfica, CO: Clima organizacional, F: Favorable, DF: Desfavorable, EC: Estado civil, NE: Nivel de estudios, P: Puesto, ENF: Enfermedad, RE: Rango de edad, ANT: Antigüedad, F: Femenino, M: Masculino, S: Soltero, C: Casado; B: Bachillerato, LIC: Licenciatura, Q: Químico, LB: Laboratorista, MT: Matutino, V: Vespertino, G: Guardia, FD: Fin de semana, RE: Rango de edad en años.

Fuente: Elaboración propia

Tabla 5. Factores de riesgo asociados al síndrome de *burnout.*

Factor de riesgo	Riesgo relativo	IC 95%	Valor de p*
Menor de 35 años	2.000	0.112 - 35.807	0.579
Antigüedad mayor a 10 años	0.500	0.028 - 8.952	0.579
Soltero	0.421	0.023 - 7.593	0.532
Mujer	1.143	0.950 - 1.375	0.296
Puesto de laboratorista	0.421	0.023 - 7.593	0.532
Estudios de licenciatura (químico)	0.688	0.41 - 13.050	0.665
Liderazgo desfavorable	1.105	0.962 - 1.270	0.517
Motivación desfavorable	1.1095	0.965 - 1.242	0.623
Reciprocidad desfavorable	1.095	0.965 - 1.242	0.623
Participación desfavorable	1.100	0.964 - 1.255	0.611

IC: Intervalo de confianza, p: significancia estadística, *X^2 < 0.05 prueba exacta de Fisher.

Fuente: Elaboración propia

Tabla 6. Riesgo de tener alguna enfermedad debido a presentar el síndrome de *burnout*

Factor de riesgo	Riesgo relativo	IC 95%	Valor de p*
Síndrome de *burnout*	2.00	0.112 - 35.807	0.579

IC: Intervalo de confianza, p: significancia estadística, *X^2 < 0.05 prueba exacta de Fishe.

Fuente: Elaboración propia

Tabla 7. Coeficiente de Pearson para las dimensiones del síndrome de *burnout* y el clima organizacional

Variable	Pearson	Valor de p
Agotamiento emocional	-0.16	0.412
Despersonalización	-0.10	0.594
Realización en el trabajo	0.55*	0.002

*: Valor de p < 0.005, p: significancia estadística.

Fuente: Elaboración propia

Discussion

The study population was composed of 29 workers (that is, all the staff of the chosen clinical laboratory). Specifically, 16 were female and 13 male. It was found that 12 studied in the baccalaureate level and 17 in the bachelor's degree. Also, 20 worked as laboratoristas and 9 as chemists.

However, in particular, it was found that 2 female persons had high levels of burnout syndrome: one with a bachelor's degree and the other with a bachelor's degree. The remaining 25 people showed mean levels of the syndrome (Table 2).

On the other hand, Table 3 shows that there were 5 people with high levels in the dimension of depersonalization for the burnout syndrome and 10 with low scores for the performance at work. It should be remembered that low scores in the latter are what define the syndrome.

Likewise, it was determined that in the laboratory an unfavorable organizational climate is perceived in each of its variables: leadership, motivation, reciprocity and participation (figure 1). Of the 9 people who occupied a chemical post, 2 perceived a favorable environment; while of the 17 that studied at the bachelor's level, 14 perceived it as unfavorable (table 4).

Likewise, and although Table 5 shows that having less than 35 years of age predisposes to high levels of burnout syndrome, in the study this data was not statistically significant.

In addition, and as 9 people occupied positions of chemists and 17 people studied undergraduate, we sought to associate these variables as a risk factor, since some authors indicate that the fact of obtaining low personal achievements is higher in people with low satisfaction of professional rewards (Carrillo-Esper, Gómez-Hernández and Espinoza, 2012). However, a relative risk of 0.421 was obtained. In other words, the fact of being a laboratory worker was associated as a risk factor because there are 8 people who have studies at the undergraduate level who hold a position held by people with a baccalaureate level, while associating having a level of education of the degree program, a value of 0.688 was obtained for this risk factor.

On the other hand, when the burnout syndrome was related to the presence of a disease, it was determined that there was a double risk, although it was not statistically significant (Table 6).

The analysis to determine the link between the burnout syndrome and the organizational climate was made taking into account the four dimensions: leadership, motivation, reciprocity and participation. In this sense, a negative, moderate and significant relationship was determined between personal fulfillment and the organizational climate. On the other hand, it was perceived that when there is an unfavorable organizational climate, not only are there greater levels of emotional fatigue and depersonalization, but also job satisfaction decreases (table 7). It should be noted that it is possible that a strong association between the unfavorable climate and the presence of burnout due to the insufficient number of participants has not been detected.

On the other hand, it should be noted that in the study only 2 people showed high levels of burn out syndrome, despite the unfavorable climate found, which is evident in the 25 individuals who presen ted moderate levels of this phenomenon.

Taking into account the above, the analysis was carried out to determine the relationship between the presence of the burnout syndrome and the variables of the organizational climate. In this regard, it is essential that appropriate measures be taken to improve the work environment in the clinical laboratory, for which a subsequent study must be carried out that assesses the job satisfaction of employees, which is conditioned by objective and subjective factors. For the study of job satisfaction, however, other factors must be considered, such as recognition, salary, social benefits, working conditions, etc. (Arias and Arias, 2014).

Finally, although it is true that only a significant relationship was found between job satisfactio n and the organizational climate, an unfavorable environment was also detected in the clinical laborator y, so a program should be created for the management and correction of Current conditions that allow a voiding or attenuating high levels of burnout syndrome.

Conclusions

In any study it is important to focus attention on the thinking and emotional part of a health organization, that is, the worker, either with a capital or resource perspective, but mainly as a human factor. For this, it is possible to use different indicators, such as the work environment and the burnout syndrome, because when you have a better perception of these variables you can devise strategies that lead to increase quality in any unit of work.

On the other hand, one aspect that should be emphasized is leadership. For this, it is relevant to use other tools that encourage teamwork and take into account strategies to manage fatigue and stress.

Likewise, it should be considered that a favorable work environment allows the worker to make better decisions and act with greater freedom. For this, it is necessary that laboratory leaders thoroughl y evaluate which aspects should be addressed or corrected to optimize the performance of employees.

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Rol de Contribución	Definición (solo poner nombre del autor)
Conceptualización	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Metodología	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Software	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Validación	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Análisis Formal	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Investigación	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Recursos	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Curación de datos	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Escritura - Preparación del borrador ori ginal	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Escritura - Revisión y edición	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Visualización	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Supervisión	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Administración de Proyectos	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"
Adquisición de fondos	Luis Daniel Bernal Albarrán "principal" Manuel Donovan Chávez Tiscareño "que apoya"