

STUDY OF PSYCHOSOCIAL RISK FACTORS IN ITSSPC TEACHERS, ACCORDING TO NOM-035-STPS-2018.

STUDY OF PSYCHOSOCIAL RISK FACTORS IN ITSSPC TEACHERS, ACCORDING TO NOM-035-STPS-2018

Mónica De León González¹, Blanca Gladiola Ramirez Montemayor², Frederic Azael Madinaveitia Ramirez³, Alondra Gabriela Félix Martínez⁴, Lesly Guadalupe González Treviño⁵

<https://doi.org/10.61117/ipsumtec.v7i2.315>

¹Master in Occupational Health, Tecnológico Nacional de México/ITS de San Pedro de las Colonias, Industrial Engineering Division, monica.deleon@tecsanpedro.edu.mx, 8711893437, CP. 27018. <https://orcid.org/0009-0001-7740-0788>

²Master in Quality Management Systems, Tecnológico Nacional de México/ITS de San Pedro de las Colonias, Head of Planning & Management Representative of the Integral Management Systems of Grupo Multisitios 1, blanca.ramirez@tecsanpedro.edu.mx, 8711160712, CP. 27950. <https://orcid.org/0009-0001-9788-3588>

³Student of Industrial Engineering, Tecnológico Nacional de México/ITS de San Pedro de las Colonias, Industrial Engineering Division, frederic.madinaveitia.21ind@tecsanpedro.edu.mx, 8715164453, CP. 27950. <https://orcid.org/0009-0006-6397-1869>

⁴ Student of Industrial Engineering, Tecnológico Nacional de México/ITS de San Pedro de las Colonias, Industrial Engineering Division, alondra.felix.21ind@tecsanpedro.edu.mx, 8721218120, CP. 27810. <https://orcid.org/0009-0003-5930-8050>

⁵ Student of Industrial Engineering, Tecnológico Nacional de México/ITS de San Pedro de las Colonias, Industrial Engineering Division, lesly.gonzalez.21ind@tecsanpedro.edu.mx, 8721045703, CP. 27916. <https://orcid.org/0009-0003-9098-7098>

Summary. This research addresses the evaluation of psychosocial risks in the work environment of teachers at the Instituto Tecnológico Superior de San Pedro de las Colonias (ITSSPC). The importance of this evaluation is recognized in order to determine the possible impact on the mental health of teachers, as well as on their work performance and the educational quality provided by the Institution. Using NOM-035-STPS-2018, a comprehensive analysis of the risk factors present in the work environment of ITSSPC teachers will be carried out. In addition, it will be determined under the comparison of the risk level of the studied population, by means of the trend that may come to have, established by the Reference Guide II. Therefore, this research work is framed in a preventive approach, with the purpose of generating valuable information that contributes to improve the well-being and occupational health teachers, as well as to strengthen the educational quality offered by the ITSSPC.

Key words: Workplace, Favorable Organizational Environment, Psychosocial Risk Factors, Worker, Workplace Violence.

Abstract. The present research addresses the evaluation of psychosocial risks in the work environment of the teachers at the Instituto Tecnológico Superior de San Pedro de las Colonias (ITSSPC). The importance of this evaluation is recognized in order to determine the possible impact on the mental health of the teachers, as well as on their work performance and the educational quality provided by the Institution. Using the NOM-035-STPS-2018, an exhaustive analysis of the risk factors present in the work environment of the ITSSPC teachers

will be carried out. In addition, the risk level of the studied population will be determined by comparing the trend it may have, established by Reference Guide II. Therefore, this research work is framed in a preventive approach, with the purpose of generating valuable information that contributes to improving the well-being and occupational health of the teachers, as well as strengthening the educational quality offered by the ITSSPC.

Key words - Workplace, Favorable Organizational Environment, Psychosocial Risk Factors, Worker, Workplace Violence.

INTRODUCTION

The mental health and occupational well-being of teachers in higher education are fundamental aspects that directly influence their professional performance and the quality of teaching provided.[2][8] In this context, it is crucial to address psychosocial risk factors (PSRFs) in the work environment of teachers, as they can have a significant impact on their mental health and overall quality of life.[10] However, despite the importance of the topic, there is still a lack of comprehensive assessment and preventive implementation in many educational institutions. The Instituto Tecnológico Superior de San Pedro de las Colonias (ITSSPC) is no stranger to this problem. Although the importance of assessing and addressing psychosocial risks in the work environment of teachers is recognized, to date there has been no comprehensive assessment in accordance with established regulations. This situation raises the need to undertake research of a preventive nature, with the objective of

identify and analyze the psychosocial risk present in the work environment of ITSSPC teachers.

The present research aims to fill this gap in the academic literature of the Institute, as well as to contribute to the development of effective strategies to promote a healthier and more productive work environment for ITSSPC teachers. Through a preventive and evidence-based approach, it seeks not only to understand the psychosocial risks in the educational environment, but also to propose concrete interventions to improve the well-being and quality of life of teachers, well as the educational quality offered by the institution, as an object of study of the general university sector.

Background

The background of the present research can be traced back to the growing concern for the mental health and occupational well-being of teachers in educational settings [2][3]. Globally, an increase in cases of stress, anxiety, burnout, and job dissatisfaction among education professionals has been observed, leading to increased interest in understanding and addressing the factors contributing to this issue.[2][7][9][9]

In the specific context of the ITSSPC, the need to evaluate the work environment of teachers in relation to psychosocial risk factors that may be present within the institution is identified.[1][14] Despite the importance of the subject, to date there has not been an exhaustive evaluation of these risks in accordance with the corresponding Official Mexican Standard within the Tecnológico, since as stipulated in NOM- 035-STPS-2018 published in the Official Journal of the Federation, the elements must be established to identify, analyze and prevent psychosocial risk factors, as well as to promote a favorable organizational environment in all work centers.[1][14]

In view of this situation, the present research of a preventive nature was undertaken with the objective of analyzing and identifying the different psychosocial risk factors present in the work environment of ITSSPC teachers, as a sample of the university sector.

Description of the Problem

At the Instituto Tecnológico Superior de San Pedro de las Colonias, the work environment of teachers has not been evaluated in terms of psychosocial risks, as established by the Mexican Official Standard in this area.[1] Given this lack, this preventive research is proposed in order to analyze and determine the possible impact on the mental health of teachers, and therefore, on their job performance and the quality of education provided.

In order to carry out this analysis and evaluation of psychosocial risks, the following methodological framework will be used as a methodological framework

reference guide II of NOM-035-STPS-2018.[1][5] This guide will provide a solid structure to identify and analyze the risk factors present in work environment of teachers. Through this study, we seek to generate valuable information that will contribute to improve the well-being and occupational health of teachers, as well as to strengthen the educational quality offered by the ITSSPC, as a sample of the general university sector.

DEVELOPMENT

[1]An evaluation of psychosocial risk factors was developed and implemented in order to identify and analyze the level of psychosocial risk of ITSSPC teachers, in accordance with NOM-035-STPS-2018.

Methodological procedure

[1][14]For the evaluation carried out in the identification of psychosocial risk factors, the Reference Guide II of NOM-035-STPS-2018 for the identification and analysis of psychosocial risk factors in workplaces was used.[1][5] But it is important to mention that the objective of the Standard is to establish the elements to identify, analyze and prevent psychosocial risk factors, as well as to promote a favorable organizational environment in workplaces. In accordance with the Federal Regulation on Safety and Health at Work and the Standard itself, the following aspects are included:

- Favorable Organizational Environment. Evaluates the positive conditions of a work environment that promotes the development of competencies and skills of workers, fostering their health and well-being.
- Psychosocial risk factors. Identifies the elements that may cause physical and mental health disorders, derived from the nature of the job functions, type of workday and exposure to severe traumatic events or acts of workplace violence.

[1][5]Moreover, the methodology developed in the Reference Guide II involves assessing the conditions and nature in which they perform their activities by means a questionnaire; because, although the level of psychosocial risk is appreciated, it does not contemplate a psychological evaluation of the body of workers to be evaluated. Therefore, the identification and analysis of psychosocial risk factors should contemplate the following aspects:

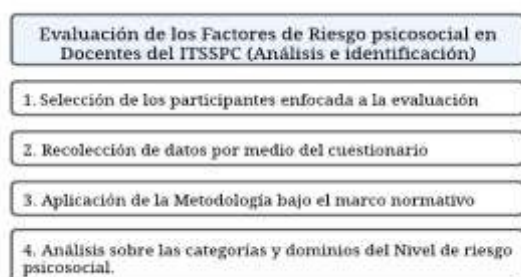
1. Conditions in the work environment.
2. Workloads.
3. Lack of control over the work.
4. Working hours and shift rotation that exceed the provisions of the Federal Labor Law.
5. Interference in the work-family relationship.
6. Leadership and relationships at work.
7. Workplace violence.

[1]Broadly speaking, it considers the domains that may have an impact on the level of psychosocial risk, but although it addresses the domains and categories, it considers the groups of items (consisting of 46 questions and/or items of the questionnaire) where they are also classified in dimension and category, which, together with the domain, will receive a rating according to the level of psychosocial risk of the evaluated worker.

[1] In addition, considering all the evaluation made in the Reference Guide II, a final rating of the questionnaire must be given, where the criteria: "Null" corresponds to a rating of less than 20; "Low" is less than or equal to 20 but greater than or equal to 45; "Medium" is less than or equal to 45 and greater than or equal to 70; "High" is less than or equal to 70 and greater than or equal to 90; and finally "Very High" is greater than 90.

This final rating makes it possible to identify the level of psychosocial risk present in the evaluated workplace and to establish the corresponding preventive and intervention measures.

However, to carry out the evaluation for the identification of psychosocial risk factors, the following scheme was developed, which allows the team the scope of each of the steps to be performed in this research, in order to collect information and likewise, to report the results obtained. The following will show the stages of the procedure needed to perform the evaluation, in order to understand and analyze the phases of the evaluation shown in figure 1.



research focuses on preserving the privacy or the personal information of the teachers participating in the evaluation. In addition, it is important to note that the

Participation in this survey is completely voluntary, offering teachers the freedom to decide whether they wish to take part in the study.[1] The survey is open to all teachers, and they are free to decide whether they wish to take part in the study or not.

It is important to mention that guideline II.2 of the Reference Guide II was contemplated, which establishes guaranteeing the ideal conditions for the adequate completion of the questionnaire for each of the teaching employees who participated in this exercise.

Data collection through the questionnaire [1][4][6]The questionnaire was implemented through a digital platform designed and administered by the research team. This choice was made with the aim of ensuring greater robustness in the preservation of the anonymous response by the participating teachers. In spite of this, we were able to collect significant data from a total of 31 teachers of the Institute, which represents a considerable proportion in relation to the total number of teachers that make up the institution. This broad participation demonstrates the interest and willingness of the ITSSPC faculty to contribute to the study and improve working conditions in the educational environment.

Application of the Methodology

An evaluation was conducted by the research team in order to identify the level of psychosocial risk that the ITSSPC teaching team is exposed to, for this, this evaluation was conducted using the Mexican Official Standard NOM-035-STPS- 2018, Psychosocial risk factors at work-Identification, analysis and prevention, which is developed by the Ministry of Labor and Social Welfare of the Government of Mexico. The data were collected from a digital platform, to be passed to a database, which undergoes a comprehensive assessment, according to the Reference Guide II and the questionnaire to identify psychosocial risk factors in workplaces, same as the Guide indicated (with 46 questions applied to determine psychosocial risk factors that stand out for qualification).[1][5] The evaluation was derived from taking the average of the 31 teachers evaluated to establish the general risk level found within the Tecnológico, so that the institutional psychosocial risk level is 72, which is considered high, according to the established ranges given for the final rating of the questionnaire.

[1]In the following figure 2, each of the evaluations rated in a graph of observations of the surveyed teachers will be shown, taking into account the level of psychosocial risk that was obtained in each of the questionnaires carried out.



ITSSPC teachers.

These data show that about 15 teachers of those surveyed under the Questionnaire of the Reference Guide II, is above the average level of psychosocial risk, which shows that at least 48% of teachers have a higher level of risk than the average provided by the population studied, so that criteria such as "High" and "Very High", have an impact and a very considerable proportion, when establishing preventive measures to reduce the level of risk in the teachers of the Institute.[1] The data show that the level of psychosocial risk is higher than the average of the population studied, which shows that at least 48% of teachers have a higher level of risk than the average provided by the population studied, so that criteria such as "High" and "Very High" have an impact and a very considerable proportion, when it comes to establishing preventive measures to reduce the level of risk in the teachers of the Institute.[1]

The final score determined for each of the values was determined based on Table 3 section c) of the Reference Guide II, where the dimension, domain and category score of each of the items of the questionnaire is contemplated, therefore, the following figure establishes the table that determines the ranges that qualify the result of the questionnaire.[1] The following table shows the ranges that determine the results of the questionnaire.

Resultado del cuestionario	Nulo o despreciable	Bajo	Medio	Alto	Muy alto
Calificación final del cuestionario C_{final}	$C_{final} < 20$	$20 \leq C_{final} \leq 45$	$45 \leq C_{final} \leq 70$	$70 \leq C_{final} \leq 90$	$C_{final} > 90$

Table 1. Ranges for awarding the final score of the questionnaire.

Analysis of psychosocial risk level categories and domains

[1][11][13] The nature of risk factors is broad. Some derive from workload and work organization (FRPS), while others stem from the human factor from a psychological perspective. These factors can arise from problems in the work environment, social relationships, and even interference between work and family. If these factors exceed the capabilities of the worker, they can generate job dissatisfaction, instability in labor relations and unproductive collaboration, and even acts of violence that negatively affect the worker, to address this complexity, domains and categories will be analyzed within the context of NOM-035-STPS- 2018. These specific areas are evaluated to identify

psychosocial risk factors at work. As with the final rating of the questionnaire, the domains and categories contain ranges indicating their relevance. This makes it possible to prioritize the corresponding measures according to the scores obtained from the worker's data.

In this case, a general report has been produced that calculates the average risk by domain and category (see Table 3). Its objective is to identify the most relevant areas of assessment to focus on ITSSPC teachers. This approach allows us to design specific strategies to improve the mental health and well-being of workers, as well as to prevent risk situations. [1]

Table 2. Ranges established for the rating of

2) Para la calificación de la categoría					
Calificación de la categoría	Nulo o despreciable	Bajo	Medio	Alto	Muy alto
Factores de trabajo	$C_{cat} < 8$	$8 \leq C_{cat} < 10$	$10 \leq C_{cat} < 12$	$12 \leq C_{cat} < 14$	$C_{cat} \geq 14$
Factores propios de la actividad	$C_{cat} < 10$	$10 \leq C_{cat} < 20$	$20 \leq C_{cat} < 30$	$30 \leq C_{cat} < 40$	$C_{cat} \geq 40$
Organización del tiempo de trabajo	$C_{cat} < 4$	$4 \leq C_{cat} < 6$	$6 \leq C_{cat} < 8$	$8 \leq C_{cat} < 12$	$C_{cat} \geq 12$
Liderazgo y relaciones en el trabajo	$C_{cat} < 10$	$10 \leq C_{cat} < 18$	$18 \leq C_{cat} < 28$	$28 \leq C_{cat} < 38$	$C_{cat} \geq 38$

3) Para la calificación del dominio					
Resultados del dominio	Nulo o despreciable	Bajo	Medio	Alto	Muy alto
Condiciones en el ambiente de trabajo	$C_{dom} < 5$	$5 \leq C_{dom} < 8$	$8 \leq C_{dom} < 17$	$17 \leq C_{dom} < 24$	$C_{dom} \geq 24$
Carga de trabajo	$C_{dom} < 12$	$12 \leq C_{dom} < 16$	$16 \leq C_{dom} < 20$	$20 \leq C_{dom} < 24$	$C_{dom} \geq 24$
Falta de control sobre el trabajo	$C_{dom} < 5$	$5 \leq C_{dom} < 8$	$8 \leq C_{dom} < 11$	$11 \leq C_{dom} < 14$	$C_{dom} \geq 14$
Formas de trabajo	$C_{dom} < 1$	$1 \leq C_{dom} < 3$	$3 \leq C_{dom} < 4$	$4 \leq C_{dom} < 6$	$C_{dom} \geq 6$
Interferencia en la relación labor-familia	$C_{dom} < 1$	$1 \leq C_{dom} < 2$	$2 \leq C_{dom} < 4$	$4 \leq C_{dom} < 6$	$C_{dom} \geq 6$
Liderazgo	$C_{dom} < 3$	$3 \leq C_{dom} < 5$	$5 \leq C_{dom} < 8$	$8 \leq C_{dom} < 11$	$C_{dom} \geq 11$

categories and domains.

Overall report of domains and categories according to Psychosocial Risk					
Category	Domain	Domain		Category	
		Σ Domain	Indicator D	Σ Category	Indicator C
Work environment	Conditions in the environment of work	4	Under	4	Under
Factors specific to the activity	Workload	26	Very high	37	High
	Lack of control over work	11	High		
Organization of working time	Workday	4	Medium	7	Medium
	Interference in the work-family relationship	3	Medium		
Leadership and relationships at work	Leadership	7	Medium	24	Medium
	Relationships in the work	7	Under		
	Violence	10	Medium		

Overall report of domains and categories, established by the mean of the teacher response.

Categories

To analyze the categories of this evaluation, we will select the two with the greatest impact. This will help us to identify the areas of attention, where the most relevant FRPS are found in the studied teaching population.

[1]The Activity-specific factors category reflected in Table 3 includes crucial domains such as workload (with value of 26 and an indicator of "Very high") and lack of control over work (with a value of 11 and an indicator of "High"). This category, with a high total value of 37, underlines the need to

imperative to address and improve working conditions to safeguard the mental health and well-being of educators.

[1][9][13] Activity-specific factors comprise the specific elements within the work environment that can negatively influence the mental health of workers. These factors include job content, workload, social interaction at work, leadership, and workplace violence, among others. Theoretically, these factors are used to evaluate the existence of lack of control at work or the possibility of professional development within the university faculty. The high score recorded in the table indicates a notable lack of control and a significant workload, which can be detrimental to teachers' mental health. This finding highlights the need to implement interventions that improve working conditions and thus promote educators' well-being.

[1][11] In the following category leadership and relationships at work are crucial categories for the prevention of psychosocial risks. This category helps us to identify the quality of relationships among teachers and to detect the presence of any type workplace violence. In Table 3, this category presents an average indicator with a value of 24. This score reflects the interaction established in the work context and covers aspects such as difficulty in interacting with educators in work-related problems, as well as unfavorable characteristics of these interactions, such as poor or no teamwork and lack of social support.

Although the standard prioritizes the identification of all areas of attention for workers, it is crucial to focus intervention plans on the areas with the greatest presence of risk. Therefore, the following section will address the domains of the activity-specific factors category, as they stand out in comparison to other domains established in the Reference Guide II.

Domain

[1][13][15] As the first domain, which is workload, it is maintained as the set of activities and responsibilities performed during the workday, using specific skills, this crucial aspect to be measured and adjusted proportionally to the time spent on the job. In the general report of domains and categories (see Table 3), a significantly high value of 27 stands out in the workload domain, which points to a considerable work overload among ITPSSC teachers. This situation can result in high levels of stress, burnout and difficulties in balancing work and personal life.

Consequently, teachers may experience a deterioration in their emotional and physical well-being, as well as a decrease in the quality and productivity of their teaching. It is imperative to address this excessive burden to ensure the well-being and effectiveness of teachers in their educational work.

[15] Lack of control over work refers to the worker's limited ability to influence and make decisions regarding relevant aspects of their work activities. In the context ITPPSC teachers, this lack of control can have a number of negative implications, such as decreased educational quality, lack of classroom discipline, poor student academic performance, and loss of motivation for both teachers and students. In addition, it can contribute to the creation of a tense and uncollaborative work environment in the educational institution.

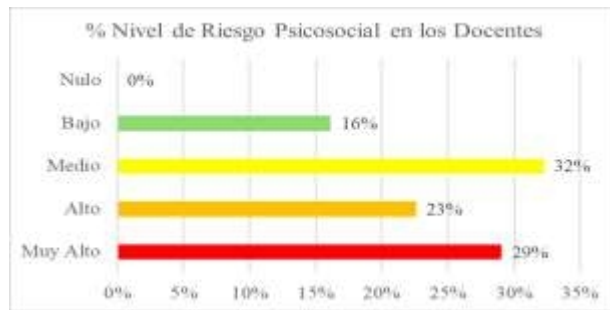
[1][10][11] Analysis of Table 3 of the general report of domains and categories reveals a significant score of 11 in the domain of lack of control over work, indicating that teachers experience a considerable lack of autonomy in their job functions. This lack of control can generate stress, anxiety and demotivation in teachers, negatively impacting their psychological well-being and job performance. It could also have adverse repercussions on the quality of teaching and the educational environment in general.

[1][5][14] It is essential to address this problem in order to improve teachers' working conditions and promote a healthier and more productive work environment. Implementing measures that encourage teacher participation and autonomy in decision making can be fundamental to mitigate the negative effects of the lack of control over work and improve the quality of the educational process in the institution.

DISCUSSION AND ANALYSIS OF RESULTS

[1] In this section, the results obtained from the Reference Guide II Questionnaire of the standard, provided only for ITSSPC teachers in the context of the evaluation of psychosocial risk, according to NOM-035-STPS-2018, are analyzed and discussed. The hypothesis posed suggests that there are Significant relationships between these factors and the mental health of teachers.

[1][6] Following the indications for the completion of the questionnaire and based on the methodology described in the research, a psychosocial risk level of 72 points was found (see Methodology), so that, according to the ranges established by the final rating of the questionnaire (see Table 1), it shows a "high" level of psychosocial risk on average among teachers.



Percentage of psychosocial risk level by established range (see Table 1).

[1]According to the results, the "High" and "Very High" ranges represent 23% and 29%, considering that they are above the average of the Institute's teachers, where the analysis needs to be carried out in detail, in order to detect the focal points of attention where the risk is higher, with the identification of each category and domain. Considering that 52% of teachers are found with this magnitude of risk, it means that the factors in the ITSSPC environment have a significant impact on the mental and emotional health of workers, where risk domains such as workload, lack of control over work and working hours are frequently present.

[1] However, 32% and 16% of teachers are in the "medium" and "low" ranges in the level of psychosocial risk, respectively, where at least we can consider that some domains such as relationships at work, conditions in the work environment and leadership have an impact on these results. Although the majority of teachers have a relatively low level of psychosocial risk, this helps us to identify where the trigger areas are, according to the groups of domains and the categories we have within the norms used.

Therefore, considering the psychosocial risk trends observed in three specific questions, these were selected because of their significant impact on the identification of psychosocial risk in the population studied.

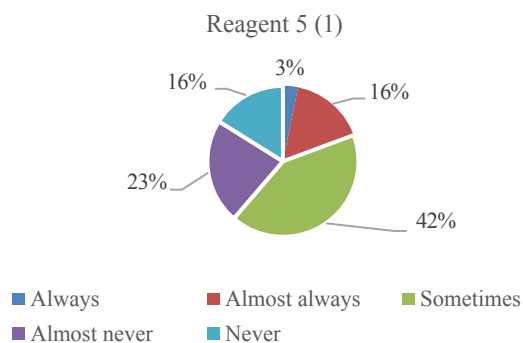
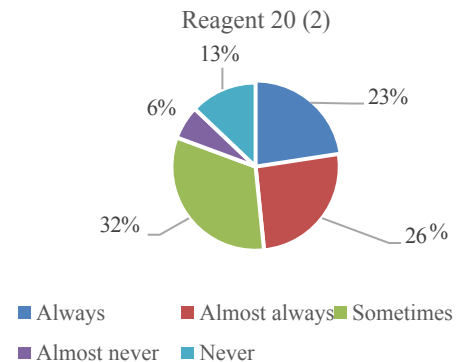


Figure 4. Graph of reagent 5 on non-stop work.

[1]First, item 5 of the questionnaire (see Figure 4), reads as follows: "Because of the amount of work I have to work non-stop", where the results show that 42% of the respondents work non-stop sometimes due to workload, while 3% and 16% state that they always or almost always experience this situation. These data suggest that a significant proportion of teachers face considerable work pressure.

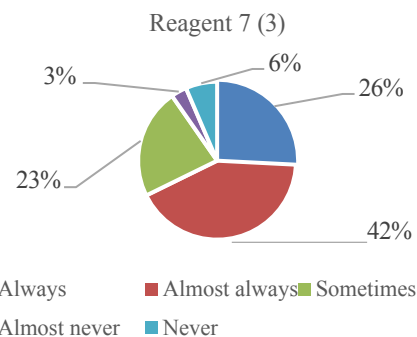
Figure 5. Graph of reagent 20, in accordance with the



Reference Guide II questionnaire.

[1] Second, item 20 of the questionnaire, which corresponds to the question: "I consider that in my job I am asked to do unnecessary things", shows the following results: 32% of the respondents answered "Sometimes", 26% answered "Almost always", and 23% answered "Always". On the other hand, 13% indicated "Never" and 6% "Almost never". This indicates that a considerable part of the teachers perceive that they are frequently asked to perform tasks that they consider unnecessary, which can generate frustration and professional burnout, negatively affecting their job satisfaction and performance.

Figure 6. Graph of reagent 7, over concentration.



that the job demands.

[1] Finally, item 7, corresponding to the following question: "My job requires me to be very concentrated", shows that 42% of teachers responded "Almost always", 26% "Always", and 23% "". [10][11] This indicates that a significant majority of teachers perceive a high demand for concentration in their work, which may have implications for increased stress and mental fatigue, thus affecting their work status and personal performance.

Taking into account all of the above, the hypothesis of evidencing the presence of psychosocial risk factors in the work environment of ITSSPC teachers that could be related to stress, emotional exhaustion, job dissatisfaction and psychological well-being is supported. However, it would be necessary that taking into account the previous items, as well as the domains and categories relevant to the level of risk, a recommendation be issued to monitor and prevent these risks from continuing to impact teachers.

Discussion of results

In relation to the objectives of the research psychosocial risk factors in ITSSPC teachers, where a worrying panorama has been revealed, according to the workload and the mental and/or emotional impact it presents for this labor group. When comparing these data with other previous studies and with contexts in the educational sector in Mexico, a convergence of data from other investigations and with this line of research is observed, which, as a whole, reinforce the validity of the study at ITSSPC.

[16] In the first instance, the research of the Autonomous University of the State of Hidalgo (UAEH) in a Mexican university, which is focused on the identification of psychosocial risks, following the guidelines and evaluation requirement of NOM- 035-STPS-2018. The results showed that 32% of the workers, where the indicator shows that the medium-high psychosocial risk, due to the workday and the lack of control over productive activities, within the domains with a greater impact within the collaborators. In this way, the research at ITSSPC identifies that teachers have a greater impact on the workload, especially in terms of hours in front of the group and in preparation of materials, among some of their activities in the academic framework. Also, the research in this article, it highlights the comprehensive approach within the interference of family responsibilities, within the work-teaching area, a factor that in the study developed by the UAEH is not highlighted in depth.

[17], the report of the study within the Universidad Veracruzana takes into account a strict process in the identification and analysis of the factors that may have an impact on the quality and quantity of the products and services offered.

psychosocial risk, also aligned with the Mexican Official Standard. This University took into account all its instances and campuses to highlight the promotion of an organizationally favorable environment, where the impact of leadership and labor relations are within the work environment of the group of workers of the university. So, having said the above, the Universidad Veracruzana despite focusing on multiple regions, so it must take a general perspective for the entire university community, while in ITSSPC a more focused analysis was conducted in the productive area teachers in a work center. Therefore, the impact of the workload on academic activities is a key aspect to deepen more exhaustively, not only to reduce and mitigate risks, in order to propose an improvement that can be managed in an efficient and balanced way in each of the activities of the academic staff.

[18] Thirdly, the research carried out at the Universidad Autónoma de Nuevo León (UANL) provides data on variations in psychosocial risks between employees who work face-to-face and those who work remotely. The ITSSPC study did not carry out a comparative study between different ways of working, since the target population is made up only of teachers in face-to-face format. However, it is important to note that the variation in work forms can have a significant influence on the perception of psychosocial risks, which could constitute a field of study for future research. However, in contrast to the aforementioned studies of the analysis, it suggests intervention strategies based on a more personalized approach, taking into account the specificities of the work environment and the particularities of ITSSPC teachers.

It is important to note that the study conducted here not only complies with the regulations of NOM-035- STPS-2018, but also suggests a detailed analysis of how workload and work-family interference directly impact the productivity and emotional well-being of teachers. Through a comprehensive study, it not only manages to recognize the most significant risks, but also to present proposals aimed at changing labor administration at ITSSPC. This is not restricted to a regulatory approach, but creates a link between regulation and daily practice, promoting an organizational environment that meets both the regulatory requirements and the authentic needs of the teaching team. It is crucial to underline that this study not only pursues compliance with the legal framework of Mexican regulations, but also aims to lay the foundation for fostering and optimizing the work environment in an organization. Likewise, it strengthens the observance of regulations and establishes the

The company has a strong foundation for future actions to ensure a healthier and more efficient work environment in the long term.

Recommendation

[1][6] Within the psychosocial risk factors in teachers, there was the need to take as a sample the ITSSPC within the university labor level, where a "High" average risk has been observed among the teachers studied, according to the reference guide II of the NOM-035-STPS-2018, which indicates an urgent intervention within the ITSSPC, as well as university institutions, since it is not an isolated case. To address this issue in an effective and practical manner, the development of an intervention program focused on the main areas of attention within the psychosocial factors evaluated in this research is recommended. That said, the following is recommended:

- Conduct periodic assessments using valid instruments to measure stress and other psychosocial risk indicators.
- Implement a training and awareness campaign to educate teachers about the importance of mental health and psychosocial risks that can occur in the university education area. This campaign could include workshops on stress management techniques, as well as training in communication skills and conflict resolution.
- Finally, existing psychosocial risk prevention policies should be updated and disseminated to the Institute's employees to ensure that they are understandable and accessible to all teaching staff.

These types of intervention policies should be effectively implemented and widely disseminated not only in the Instituto Tecnológico de San Pedro de las Colonias, but in all university institutions, with a comprehensive approach that can prevent risks to workers and promote a more harmonious, collaborative, safe and stable environment. By focusing on continuous evaluation, awareness and training, as well as the revision of policies, a healthy work environment can be created and support the psychological well-being of ITSSPC teachers in an effective way.

CONCLUSIONS

At the beginning of the present investigation of the Study of psychosocial risk factors in the teachers of the Instituto Tecnológico Superior de San Pedro de las Colonias, it has shown the importance of addressing the high levels of risk and mental health problems in this institution.

group. In accordance with NOM-035-STPS-2018, which provides a framework for identifying, analyzing and preventing these risks in the work environment, it highlights the need to implement effective interventions urgently within the Institute, as well as in the university sector in general.

The findings reveal that excessive and unnecessary workload and high demand for concentration are critical factors that negatively influence teachers' psychological well-being. These factors contribute to high levels of emotional exhaustion and job dissatisfaction, which affect both the mental health of individuals and the quality of the educational environment at ITSSPC.

To meet the objectives of NOM-035-STPS- 2018 and improve the situation, it is crucial to conduct periodic and detailed assessments of psychosocial risks, promote awareness campaigns on the importance of mental well-being, and update risk prevention policies. These actions will directly contribute to the improvement of teachers' well-being and the creation of a healthier and more productive work environment.

As a conclusion, it can be highlighted that this type of analysis allows to identify critical areas of a work environment on the psychosocial side, where its purpose is not only to identify them, but also to carry out the corresponding actions that can reduce and cushion in a better way, the presence of stress, job burnout and even the presence of diseases or disorders, which may negatively impact the personal lives teachers and university workers.

It is essential to emphasize that the university sector would benefit greatly by maintaining constant monitoring and implementing comprehensive psychosocial health for education workers. These measures will not only improve the environmental conditions and psychological well-being of teachers, but will also enable the Institute to offer a higher quality education. By ensuring the mental well-being and working conditions necessary for the teaching staff, where ITSSPC and other universities can guarantee an environment conducive to learning and effective teaching. In this way, a virtuous circle is established in which caring for the psychosocial health of educators results in improved educational quality for the benefit of students.

Projections and future lines of research Based on the results achieved, two future lines of research are proposed. The first strategy, as a line of research, will focus on the creation of an Improvement Plan for the ITSSPC, with the objective of

enhance the favorable organizational environment for teachers, in accordance with the provisions of NOM-035-STPS-2018. According to the recommendations of the article studied, this plan should focus on assessing the distribution of the workload, improving the structure of tasks and conducting regular evaluations to identify areas that require action. It will propose the improvement of job profiles, the reassignment of tasks according to staff competencies, and the implementation of breaks and task rotations to avoid work overload. These actions are aimed at generating a more balanced work environment, promoting the wellbeing of teachers and fostering the organizational culture of the work center.

The following research proposal proposes to incorporate in ISO 45001, to maintain a constant monitoring of the legal requirement, according to NOM- 035-STPS-2018. This application will facilitate the formation of a stronger connection between the Official Mexican Standard and the ISO, generating a constant cycle of optimization in the administration of all legal requirements. By integrating the fundamentals of both regulations, a stricter and more lasting evaluation will be achieved, guaranteeing continuous monitoring that allows the detection of risks and the of actions that optimize the work environment and efficiency in the ITSSPC. With this perspective, an effective management of psychosocial risks will be ensured, favoring a healthier and more stable work environment in the long term.

ACKNOWLEDGMENTS

We would like to express our most sincere gratitude to the authors who participated in the research, in which members of the ITSSPC, especially the teachers, stood out:

To MSO. Mónica De León González and MSC. Blanca Gladiola Ramirez Montemayor, Specialists in Occupational Health and Quality Management Systems, for their invaluable support during our research. Their expert guidance and deep knowledge in the area were fundamental for the successful development of the project. We sincerely appreciate their commitment and dedication, which have been an inspiration and a crucial factor in enriching the content and quality of the article presented.

BIBLIOGRAPHY .

- [1] Mexican Official Standard NOM-035-STPS-2018
- [2] Education International [EI] (2019, 23 September). Resolution on: Mental health teachers and education support personnel. Education International. Retrieved May 12, 2024, from [https://www.ei-](https://www.ei-ie.org/es/item/23044:resolucion-sobre-mental-health-of-teachers-and-educational-support-staff)
[ie.org/es/item/23044:resolucion-sobre-mental-health-of-teachers-and-educational-support-staff](https://www.ei-ie.org/es/item/23044:resolucion-sobre-mental-health-of-teachers-and-educational-support-staff).

- [3] International Labour Organization [ILO]. (2022, 28 September). WHO and ILO call for new measures to address mental health problems at work. International Labour Organization. Retrieved May 12 2024, from: <https://www.ilo.org/es/resource/news/la-oms-y-la-oit-call-for-new-measures-to-address-mental-health-problems-at-work>.

- [4] Diaz, J. M. (2007). Factors psychosocial factors. Classification. Methodology. Evaluation. Psychosocial intervention. In J. M. Díaz, Técnicas de Prevención de riesgos laborales. Seguridad e Higiene del trabajo 9th Edition (pp. 590-604). Madrid: Editorial TEBAR. [5]Secretaría de Trabajo y Previsión Social [STPS] (2020). Guía Informativa. NOM-035-STPS-2018: Psychosocial risk factors-Identification, analysis and prevention. Secretariat of Labor and Social Welfare. Retrieved May 13, 2024, from: https://www.gob.mx/cms/uploads/attachment/file/503381/NOM035_guia.pdf.

- [6] Neffa, J. C. (2015). IX. Methodologies to approach the study of the RPST. In J. C. Neffa, Psychosocial Risks at Work. Contribution to their study (pp. 506-509). Buenos Aires: CEIL-CONICET. [7]World Health Organization [WHO], Álvarez Heredia, F. A. H., Conti Parra, L. C. P., Valderrama Mantilla, F. V. M., Moreno Vargas, O. M. V., & Jiménez Barbosa, I. J. B. (2006).

- Salud Occupational health [Academia.edu]. In Chapter II. Occupational Health (1st ed., pp. 15-16). Ecoe Ediciones.

- https://www.academia.edu/29054737/Saludocupacional_franciscolvarez_150504160527_conversion_gate01_1
https://www.academia.edu/29054737/Saludocupacional_franciscolvarez_150504160527_conversion_gate01_1

- [8] Gastaings, M., Chiarino, N., Ferrando, F., & Rodríguez, G. (2020). Environment and working conditions. In M. Gastaings, N. Chiarino, F. Ferrando, & G. Rodríguez, Estudio de Salud Ocupacional Docente (pp. 41-42). Montevideo: INEEd.

- [9] Gastaings, M., Chiarino, N., Ferrando, F., & Rodríguez, G. (2020). Characteristics of Teacher Employment. In M. Gastaings, N. Chiarino, F. Ferrando, & G. Rodríguez, Estudio de Salud Ocupacional Docente (p. 31). Montevideo: INEEd.

- [10] Gastaings, M., Chiarino, N., Ferrando, F., & Rodríguez, G. (2020). Chapter 7. Effects of work on teachers' health and well-being. In M. Gastaings, N. Chiarino, F. Ferrando, & G. Rodríguez, Estudio de Salud Ocupacional Docente (pp. 109-110). Montevideo: INEEd.

- [11] Government of Aragón, UGT Aragón, & Secretariat of Trade Union Action, Occupational Health and Environment (2007). Manual de Riesgos psicosociales en el mundo laboral. Exyge Consultores. Retrieved May 13, 2024, from: [https://www.exyge.eu/blog/wp-](https://www.exyge.eu/blog/wp-content/uploads/2016/10/prl_riesgo-psicosocial.pdf)
[content/uploads/2016/10/prl_riesgo-psicosocial.pdf](https://www.exyge.eu/blog/wp-content/uploads/2016/10/prl_riesgo-psicosocial.pdf).

[12] Centro de Estudios Financieros & Fraternidad Mucrespa (1999). Manual Básico de Prevención de Riesgos Laborales. El trabajo y la salud: los riesgos profesionales y los daños derivados del trabajo (1st ed., Vol. 1) [Scribd]. Cinco Días. Retrieved May 13 2024, from: <https://es.scribd.com/document/139580632/Manual-Basico-Prevencion-de-Riesgos-Laborales>

[13] International Labour Organization [ILO], World Health Organization [WHO], & Joint ILO-WHO Committee on Occupational Medicine (9th: 1984: Geneva) (1999). Psychosocial factors at work: nature, incidence and prevention: Report of the Joint ILO-WHO Committee on Occupational Medicine, Ninth Session, Geneva, 18-24 September 1984 (No. 56) [ILO]. International Labour Office Geneva. Retrieved 13 from May 2024, of <https://es.slideshare.net/rojasmaury/factores- psychosocial-at-work-oit-1984iafjsr>

[14] Federal Regulation on Occupational Safety and Health.

[15] Álvarez Heredia, F. A. H., Conti Parra, L. C. P., Valderrama Mantilla, F. V. M., Moreno Vargas, O. M. V., & Jiménez Barbosa, I. J. B. (2006). Occupational health [Academia.edu]. In Chapter XVI. Teachers and Occupational Health 1st ed., pp. 287-300). Ecoe Ediciones, from: https://www.academia.edu/29054737/Saludocupacional_franciscolvarez_150504160527_conversion_gate01

[16] Cotonieto-Martínez, E. (2021). Identification and analysis of psychosocial risk factors according to NOM-035-STPS-2018 in a Mexican university. Journal Of Negative & No Positive Results, 6(3), 499-523. <https://doi.org/10.19230/jonnpr.3836>

[17] Rojas-Mata, I., Suárez-Escalona, R., & Cavazos-Salazar, R. L. (2022). Psychosocial risk factors in university workers: a comparative study before and during COVID-19. CienciaUAT, 61-72. <https://doi.org/10.29059/cienciauat.v17i1.1583>

[18] Universidad Veracruzana (2021). General report of the identification and analysis of psychosocial risk factors and the evaluation of the organizational environment at the. University Veracruzana. At Universidad Veracruzana. Retrieved September 22 2024, from https://www.uv.mx/dgrh/files/2021/08/Informe-general-Norma-035_7_07_21-08Jul2021.pdf.

Methodology	White Gladiola Ramirez Montemayor Frederic Azael Madinaveitia Ramirez
Project Management	Mónica De León González
Resources	Mónica De León González
Software	Frederic Azael Madinaveitia Ramirez Alondra Felix Martinez
Supervision	White Gladiola Ramirez Montemayor
Visualization	Lesly Guadalupe González Treviño Frederic Azael Madinaveitia Ramirez
Validation	Mónica De León González Blanca Gladiola Ramirez Montemayor
Editorial staff - Original draft	Alondra Felix Martinez Lesly Guadalupe González Treviño
Writing - Proofreading and Editing	White Gladiola Ramirez Montemayor Frederic Azael Madinaveitia Ramirez



This work is
licensed under an
international license
Creative Commons Attribution 4.0.

CONTRIBUTION ROLES

Role	Author(s)
Conceptualization	Frederic Azael Madinaveitia Ramirez
Data Curation	Frederic Azael Madinaveitia Ramirez Alondra Felix Martinez Lesly Guadalupe González Treviño