

**Efecto modulador del liderazgo transformacional en el  
estrés laboral y la efectividad escolar percibida por  
trabajadores de educación básica de Ciudad Guzmán,  
Jalisco**

*Modulating effect of transformational leadership on work-stress and school  
effectiveness perceived by basic education workers in Ciudad Guzmán,  
Jalisco*

*Efeito modulador da liderança transformacional sobre o estresse no  
trabalho e a eficácia escolar percebida pelos trabalhadores da educação  
básica em Ciudad Guzmán, Jalisco*

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## Resumen

El estrés laboral docente, y su impacto en la efectividad escolar es un tema relevante y de importancia, tanto científico como social. Estudiar el estrés laboral del magisterio es una necesidad en el contexto educativo pues permite trazar medidas preventivas y de afrontamiento. El contexto de la posmodernidad y de un mundo tecno-globalizado, repercute en este nivel educativo tanto en su misión como en su función social, los trabajadores de educación básica no solo tienen por encargo la formación del niño o adolescente, sino también cubrir los espacios de aprendizaje que la familia no puede suplir unido a las demandas de eficacia y a la influencia de las condiciones de trabajo en la cultura organizacional escolar.

El propósito del presente estudio fue determinar un modelo explicativo que corrobore el efecto moderador del liderazgo transformacional sobre el efecto negativo del estrés laboral sobre la efectividad escolar en los docentes de escuelas de educación básica de Ciudad Guzmán, Jalisco. Se asumió un diseño de investigación de tipo no experimental transversal y con alcance explicativo. Se declara de esta forma, pues se observa el estilo de liderazgo, el estrés laboral y la efectividad escolar, tal como se presentan en el contexto de la educación básica por lo que no se construye ninguna situación, sino que se observan situaciones ya existentes. La metodología es cuantitativa, se utiliza un modelo de moderación a través de la interface *process* en el programa SPSS.25.

Se evidencia en el presente estudio, que existe, relación –negativa- entre el estilo de liderazgo transformacional y el estrés laboral docente percibido. En el mismo tenor, se muestra como hallazgo la relación negativa entre el estrés laboral y la efectividad escolar percibida. Se demuestra que, a mayor estrés, menor será la percepción de efectividad escolar, por tanto, el resultado avala la necesidad de intervención para reducir el estrés laboral y potenciar la efectividad de las escuelas estudiadas. El liderazgo transformacional constituye un modulador del estrés laboral y la eficacia escolar por lo que se demuestra que directores capaces de influir como modelos en sus trabajadores, con adecuado uso del carisma y tolerancia psicológica, así como con una actitud personalizada y más humana hacia sus

trabajadores garantizarán escuelas que resulten menos afectadas por estrés laboral, más efectivas en su misión social, organizacional y, por tanto, más saludables.

**Palabras clave:** efectividad, estrés, liderazgo educativo, modulación.

## **Abstract**

Teacher work stress, and its impact on effectiveness school is a relevant issue of both scientific and social importance. Studying Teacher work stress is a necessity in the educational context to allow preventive measures and coping. The context of postmodernity and a techno-globalized world has repercussions on this educational level, both in its mission and in its social function. Basic education workers not only have the task of training the child or adolescent, but also cover the spaces of learning that the family cannot supply together with the demands of effectiveness and the influence of working conditions in the school organizational culture.

The purpose of this study was to determine an explanatory model that corroborates the moderating effect of transformational leadership on the negative effect of work stress on school performance in elementary schools in Ciudad Guzmán, Jalisco. A non-experimental transversal research design with explanatory scope was assumed. It is stated in this way, since the leadership style, work stress and school productivity are observed, as well as presented in the context of basic education, no situation is built, but an already existing situation is observed. The methodology is quantitative, a moderation model is used through the interface process in the SPSS.25 program.

It is evident through present study that there is a negative relationship between the style of transformational leadership and perceived teacher work stress. In the same tenor, the negative relationship between work stress and the effectiveness school perceived education is evidenced as a finding. It is demonstrated that, a higher perceived stress, the lower the perceived effectiveness of school, therefore, the result supports the need for intervention to reduce Teacher work stress and enhance the effectiveness of the schools studied.

Transformational leadership becomes a modulator between Teacher work stress and school effectiveness perceived. Therefore, it is shown that directors capable of influencing their workers as models, with an adequate use of charisma and psychological tolerance, as well as a personalized and more humane attitude towards their workers, will guarantee schools to be less affected by work stress and hence more effective in its social, organizational and, therefore, healthier mission.

**Keywords:** effectiveness, stress, educational leadership, modulation.

### Resumo

O estresse no trabalho do professor e seu impacto na eficácia da escola é uma questão relevante e importante, tanto científica quanto social. Estudar o estresse no trabalho da profissão docente é uma necessidade no contexto educacional, pois permite elaborar medidas preventivas e de enfrentamento. O contexto da pós-modernidade e de um mundo tecnoglobalizado repercute-se nesse nível educacional, tanto em sua missão como em sua função social, não só os trabalhadores da educação básica têm a tarefa de treinar a criança ou o adolescente, mas também os espaços de aprender que a família não pode suprir junto com as demandas de eficácia e a influência das condições de trabalho na cultura organizacional da escola.

O objetivo deste estudo foi determinar um modelo explicativo que corrobora o efeito moderador da liderança transformacional sobre o efeito negativo do estresse no trabalho sobre a eficácia escolar em professores de escolas primárias em Ciudad Guzmán, Jalisco. Um desenho de pesquisa transversal não experimental com escopo explicativo foi assumido. Afirma-se desta forma, porque o estilo de liderança, o estresse no trabalho e a eficácia escolar são observados, pois são apresentados no contexto da educação básica para que nenhuma situação seja construída, mas as situações existentes são observadas. A metodologia é quantitativa, um modelo de moderação é usado através do processo de interface no programa SPSS.25.

É evidente no presente estudo que existe uma relação negativa entre o estilo de liderança transformacional e o estresse percebido no trabalho docente. No mesmo prazo, a relação

negativa entre o estresse no trabalho e a eficácia percebida na escola é mostrada como um achado. Mostra-se que, quanto mais estresse, menor a percepção da eficácia escolar, o resultado apóia a necessidade de intervenção para reduzir o estresse no trabalho e aumentar a eficácia das escolas estudadas. A liderança transformacional é um modulador do estresse no trabalho e da eficácia escolar, que mostra que os diretores são capazes de influenciar seus trabalhadores como modelos, com um uso adequado de carisma e tolerância psicológica, além de uma atitude personalizada e mais humana em relação aos seus trabalhadores. eles garantirão escolas menos afetadas pelo estresse no trabalho, mais eficazes em sua missão social, organizacional e, portanto, mais saudável.

**Palavras-chave:** efetividade, estresse, liderança educacional, modulação.

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## Introduction

Teaching work stress, and its impact on school effectiveness, particularly at the level of basic education, is a relevant and important issue from a scientific and social point of view. Studying work-related stress in the teaching profession is a necessity in today's educational context, since it allows us to draw up preventive and coping measures, taking into account the conflicts generated by the contemporary world of work, which is part of a systematic process of attrition of health and factors Psychosocial risk. These factors limit and therefore predict a low quality education and low social efficiency according to the social expectations of the basic education school organizations (Quiñones, 2017).

The context of postmodernity and a techno-globalized world has repercussions on basic education, both in its mission and in its social function. The workers of this, not only have commissioned the formation of the child or adolescent, but also cover the spaces of learning that the family can not supply together with the demands of effectiveness and the influence of working conditions in the school organizational culture. It reveals a set of factors that the scientific community demands to take into account to prevent the risks of material and symbolic deterioration of the teaching profession with its consequent implications for the quality of life and work of teachers. (Murillo and Krischesky, 2014, Rodríguez, 2012). In

this tenor it is valid to declare that although teaching work stress is a topic with a certain scientific visibility, the effects of it on organizational outcome variables such as effectiveness are scarce, as well as the role of leadership as a modulator of the effects of stress in basic education workers (Peiró and Rodríguez, 2010).

Teaching at the level of basic education is among the most stressful careers, due to the new psychosocial and risk factors generated by current socio-historical conditions. As consequences, there is mental fatigue, professional burnout, low effectiveness in tasks, sick leave with its economic and social involvement. The causes concretely relate to the complexity of the tasks, the labor profile, the high demands, and situations of impotence to generate changes in their reality (Lara, 2015).

A study conducted by Rodríguez (2012) on teaching work conditions in Guanajuato, Mexico, to a sample of 1152 basic education teachers, to whom the protocol of the International Exploratory Study on Working Conditions and Teaching Health proposed by OREALC was applied. -UNESCO, reports that the main problems of the education sector are linked to work overload, poor school infrastructure and material resources; the pedagogical demands, the violence and problems derived from the environment. The presentation of the results of this research achieved that the Education Law for the State of Guanajuato (2012), standardized in a specific section, the physical and emotional health of teachers (Article 61), and mentions the occupational stress that It frequently affects teachers. It was expected by this result that the educational reform in Mexico would take into consideration the occupational health of the teachers, but this did not happen. It is a demand of the guild of teachers of basic education to legislate issues of school labor health. The educational reform and the new educational model, due to the new demands, have influenced teacher work stress (López-Gorosave, Slater, and García-Garduño, 2010, Rodríguez, 2012).

After a study carried out in Mexico, in a secondary school in Iztapalapa and whose purpose was to analyze the presence and characteristics of burnout (called syndrome of burning at work) and of work stress (N = 28) in teachers, it was obtained that the factors of psychosocial risks that most determine work stress are associated with role ambiguity, as they are not clear about their role regarding their labor rights and obligations. It was also

found that labor demands, in contrast to the lack of resources and economic rewards, are determining factors. Other causes are associated with the difficulty to handle situations of conflict with students who present disruptive behaviors and the scarce social recognition they have as teachers (Saltijeral and Ramos, 2015).

A study conducted in Durango, Mexico, aimed to identify the organizational sources that generate stress in primary school teachers (N = 59). Through the scales of organizational sources of teacher stress, it was obtained as a result that uncertainty about the new educational reforms and their repercussions on labor rights generates instability to practice the profession. The causes are also located in the scarce information perceived by them on the reform (Madrigal and Barraza, 2014).

The most representative studies highlight that the risk factors associated with this work stress are related to: the workload, the ambiguity of the role, which suggests the relationship with the school authority, and labor rights as well, with the working conditions generated by the recent educational reform and the new educational model, today also subject to possible changes due to political issues. However, no studies are reported of the effect of work stress on school effectiveness, nor the relationship of these variables, with the leadership of the educational director, a social actor that must be established as manager of the occupational health of the school organization.

Studies on effectiveness in theoretical terms are related to efficiency and effectiveness, effectiveness is the result of these two. The second is the one that has worked the most scientifically, the approaches of the construct have gone through different approaches centered essentially on the figure of the teacher, the director, or the results of the students. The most current approaches seek to gain in rigor with respect to the treatment of the factors that determine school effectiveness. It is a promising field and with notable advances in the last ten years (Murillo, 2006). The most important study carried out by UNESCO on the subject was to identify the factors of school effectiveness in Ibero-America, as a result of which there were three fundamental groups of factors that predict school effectiveness: scholars, students and those associated with the teaching staff. School factors are shaped by school climate, infrastructure, school resources, economic management of the

center, autonomy of the center, teamwork, planning, participation and involvement of the educational community, and leadership. In the case of classroom factors, they are shaped by the classroom climate, the endowment and the quality of the classroom, the teacher-student ratio, teacher planning, curricular resources, teaching methodology, monitoring and evaluation mechanisms. student. And the third ones are the qualification of the teacher, the continuous training, stability, experience, the working conditions of the teaching staff, the involvement and the student-teacher relationship (Murillo, 2006). Efficiency models have been generated from the proposals of models that try to validate themselves in a transcultural way, in the European context we can cite the models Creemers, Stoll, Reezigt and ESI-team (2007) and the dynamic model of school effectiveness of Kyriakides, Creemers and Antoniou (2009). This model to analyze the effectiveness proposes to place in the context of the national and regional educational policy, the school policy, the quality of education, in relation to sociodemographic and psychosocial variables, as well as learning outcomes (Martínez-Garrido, 2011). In terms of effectiveness, a concept associated with organizational success, and the result of efficiency and effectiveness, it is assumed that it is a topic rarely discussed in the educational area (De Freitas and Yáber, 2014). According to a study on school effectiveness, the elements that most determine it in the context of school administration are competitiveness, the permanent environment for change, a holistic and systemic vision, a vision for the future, teamwork, satisfactory human relations, high level of commitment and responsibility and knowledge management. (Garbanzo-Vargas, 2016).

Despite the importance of these organizational results variables, there are few studies that highlight the need to identify stressors and the importance of occupational health, for school effectiveness, nor the leadership in terms of guaranteeing schools with healthy workers. This remains an issue that remains pending in the analysis of school administration and management in Mexico.

At an international and national level, the need to deepen in the field of occupational health, in leadership as a competence, and in schools as a healthy organization stands out. A meta-analysis conducted by Harms, Credé, León and Whono (which aimed to explore the relationship between three leadership constructs (transformational leadership, exchange of



leading members and abusive supervision) stress and mental exhaustion, highlights that leadership is affected. According to the work stress experienced by the directors, therefore, the positive and negative behaviors of the directors and the relationships they develop with the subordinates significantly determine the stress that subordinates can experience. Transformational leadership was proposed in this study as the most. As a result of the meta-analytical review carried out, as future guidelines, it is proposed that research should be carried out that contributes to the frontier spaces in the knowledge of these relationships and that the presented evidence generate new directions in the training programs for the development of leadership. The authors declare as expectative to these results, that the findings contribute to better working conditions for directors (leaders) and followers, in order to improve the capacity to develop better directors and organizations. It is stated how inconclusive the studies are to shed light on the subject that was worked on (Harms et al, 2017).

The transformational leadership is proposed by the WHO (2010) as the ideal style to guarantee healthy work environments. The investigations regarding the transformational leadership, according to the systematic review carried out by Cruz-Ortiz, Salanova and Martínez (2015), show that the structures of the organizations need leaders to motivate the workers, but considering the work teams as a whole. The most relevant result is that the antecedents of the transformational leadership, its possible effects and resulting in the level of the workers and the organization. Intervening variables (mediators and modulators) are identified in the leadership process, but scarce research suggests drawing lines of intervention aimed at optimizing transformational leadership. It is recommended that longitudinal studies should be carried out, since they are currently rare and multilevel analysis of the process of transformational leadership because it is multicausal and affects all levels from an organizational point of view (Cruz-Ortiz, Salanova and Martínez, 2015). Regarding Mexico, the existing empirical evidence and the collectivist tendency of Mexican society allow us to assume that transformational leadership must be the most frequent and effective, followed by the transactional and then the passive-evasive. The hierarchical pattern expected in the relation between leadership styles and performance indicators, the augmentative effect of the

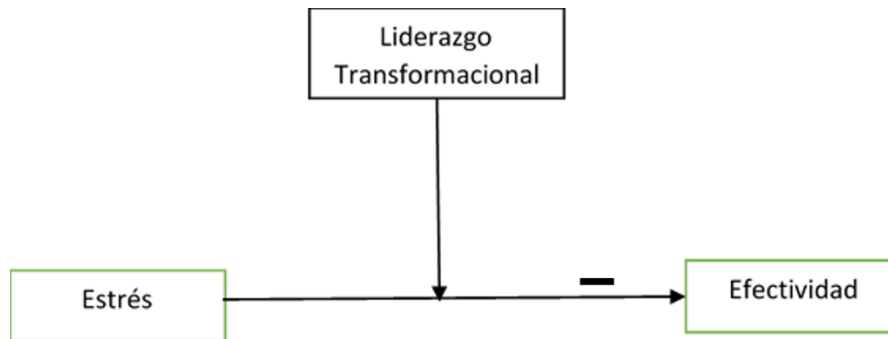
transformational style on the transactional and the prominence of the transformational in the highest hierarchical levels was justified by a study. (Ayoub, 2010).

In recent structural modeling on transformational leadership and professional burnout that had as objective to determine the influence of leadership subscales, in subscales of professional wear of teaching and administrative personnel of Normal Schools of the State of Mexico. The transformational leadership significantly influences satisfaction, ( $\beta = 0.61$ ) and is also related to extra effort ( $\beta = 0.58$ ). Transactional leadership has a significant direct influence on satisfaction ( $\beta = 0.35$ ). Transactional leadership has an inverse influence on low personal fulfillment, while laissez faire tends to be positive. The theoretical and empirical findings of previous studies were reaffirmed, such as significant direct correlations between the leadership subscales (transformational, transactional and outcome variables), and all reversed, with laissez faire. As well as the significant direct correlations between all the subscales of professional burnout. These results allow us to understand the need for teachers to agree on their work commitment, with the directors, and that they develop a leadership that can directly influence the satisfaction and extra effort of their staff to be more competent in their management functions (Mendoza , and García, 2013)

It is taken into consideration in this study that the relationship between work stress, school effectiveness and transformational leadership, is of vital importance to understand the effects of work stress on school outcome variables, as well as on the incidence of leadership as a teacher job stress modulator. .

The purpose of the following study is to determine an explanatory model that corroborates the moderating effect of transformational leadership on the negative and significant effect of work stress on school effectiveness in teachers of elementary schools in Ciudad Guzmán, Jalisco (figure 1).

Figura 1. Modelo de la moderación del liderazgo transformacional sobre el efecto del estrés laboral en la eficacia escolar.



Fuente. Elaboración propia

## Methodology

A research design of the non-experimental transversal type and with explanatory scope was assumed. It is stated in this way, since the leadership style, work stress and school effectiveness are observed, as they are presented in the context of basic education in Ciudad Guzmán, Jalisco, to later describe and analyze them; so that no situation is built, but existing situations are observed and is transversal, based on the collection of data in a single moment, in a single time, its purpose being to describe these variables and analyze their incidence and interrelation, at a given moment (Cresswell, 2008) a methodology is quantitative, a moderation model is used through the interface process in the SPSS.25 program.

The total population according to data of the Regional Delegation of Educational Services (DERSE) is of 1064 teachers of the basic education schools of Ciudad Guzmán. Through a simple random sampling, 284 participants were selected. Due to problems in the answers to the questionnaires, 8 cases were eliminated and the sample was conformed by 276 teachers. Sociodemographic variables were measured such as age, sex, marital status, type of school, level of education, and schedule.

To measure leadership and effectiveness, the Multifactor Leadership Questionnaire (MLQ) was applied: This instrument was validated in Mexico (Mendoza, 2005). It is composed of six subscales of transformational leadership behaviors, three of the MLQ are used to measure transactional leadership, a scale to measure laissez-faire style and three of

outcome variables are also measured, from these is chosen given the purpose of the study. effectiveness scale. It is validated in Mexico, the Cronbach's alpha = .90 It is answered by Likert type responses from 0 (Never) to 4 (Almost always).

To assess work-related stress, the ILO-WHO Labor Stress Questionnaire was used. The Labor Stress Questionnaire (ILO / WHO) consists of 25 items related to structure and organizational climate, technology, influence of the leader, territory and cohesion and support of the working group. It was validated in Mexico by Medina, Preciado y Pando(2007). El alpha de Cronbach = .92.

## Results and Discussion

The total population of teachers investigated (n = 276) belong to public and private schools in Ciudad Guzmán, Jalisco. They are mostly married (52.9%). They work in morning, afternoon or double shifts, and in the three levels of education, preschool, primary and secondary, of the 276 workers included, 24 are preschool which represents 8.7% of the total, 119 workers are primary education (43.1 %) and 133 of secondary education (48.2%).

The number of public school teachers is 211 (76.4%) and 65 are from private schools (23.6%). 65.9% (n = 182) belong to the morning shift, 15.6% (n = 43) to the evening and 18.5% (n = 51) have a double work shift.

In terms of age and sex, the majority of teachers are women (n = 163) which represents 59.1% of the total, the average age is 39.18 (SD .11). The majority is in the age range of 25 to 40 years with 44.6% (n = 123).

The socio-demographic profile of the teachers of Ciudad Guzmán has an average age of 39 years, the majority are women, the most common marital status is married, with a Bachelor's level of education, and they work in the morning shift.

Regarding the presence of work stress, according to the perception of teachers is in the high level of presence of work stress with an average of 54.07 (DS 32.28) which is why actions of promotion and prevention of occupational health are needed. This result is coincident with numerous studies that report the presence of teaching work stress in Mexican basic education schools (Barrigal and Madraza, 2014, Rodriguez, 2012). Women present more work stress with respect to men (p <0.05), it is noted that there is a slight

trend not statistically significant ( $p \geq 0.05$ ) in terms of also perceiving greater effectiveness in their schools (table 1).

**Tabla 1.** *Estrés laboral docente y efectividad percibida según tipo de escuela y sexo del trabajador en escuelas de educación básica de Ciudad Guzmán, Jalisco.*

		N	Mínimo	Máximo	Media	DS	P-Value
Estrés Laboral	Hombres	113	0	150	49.25	31.39	0.039
	Mujeres	163	0	150	57.41	32.55	
	Publica	211	0	150	52.36	33.27	0.453
	Privada	65	0	150	56.7	28.89	
Efectividad	Hombres	163	0	20	11.68	4.91	0.306
	Mujeres	163	0	20	12.33	5.34	
	Publica	211	0	20	12.19	5.3	0.456
	Privada	65	0	20	11.65	4.75	

*Fuente:* Elaboración propia

This result shows that women perceive more school effectiveness from the leadership management of school directors, but in turn experience more work stress. Which means that other variables may be mediating and that it is necessary to deepen this result with other studies. This coincides with research that states that women have more work stress with respect to men in teaching work. (Acosta and Burguillos, 2014, Linares and Gutiérrez, 2010)

Regarding the type of school (public or private), teacher work stress is experienced more in private schools than in public schools, although the latter perceive more school effectiveness compared to public schools (table 1).

Public schools perceive less work stress, but they also perceive greater effectiveness in the management of the directors and although these differences are not statistically significant, it opens doors to deepen with respect to the presence of work stress and the perception of school effectiveness managed by the directors. school Deepening with respect to the variables gender and type of school, it is appreciated that both men and women increase their level of work stress according to the type of school, this means that male and female teachers of private schools experience more work stress than who work in public schools. Regarding the

school effectiveness variable, the same thing happens, the perception of perceived school effectiveness decreases in both men and women according to the type of school, it is perceived to be more effective in public schools, but also less stress at work. This result is coincident with studies that show that there are no differences between public and private regarding these variables of occupational health (Mendoza and García, 2013).

To corroborate one of the assumptions of the present work-greater stress less effectiveness-it is decided to analyze with greater precision the relationship between these variables (table 2) and it is determined that, the higher the work stress, the lower the percentages of school effectiveness gestated by the directors of these schools ( $p < 0.05$ ). The relationship between these variables reports that there are no precedents of studies in the education sector that assume it from this perspective, although some outstanding approaches are those made by Mendoza, García and Xochitotl (2014) when relating the subscales of leadership with variables of organizational results and the burnout syndrome.

**Tabla 2.** *Estrés laboral y efectividad percibida en escuelas de educación básica de Ciudad Guzmán, Jalisco.*

	Estrés Laboral	N	Mínimo	Máximo	Media	DS	P-Value
Efectividad	Alto	126	0	20	10.66	5.46	0.000
	Medio	150	2	20	13.15	5	

*Fuente:* Elaboración propia

With respect to the relationship of leadership styles with work stress and school effectiveness (table 3), leadership, transformational, transactional and laissez faire styles are correlated with work stress and school effectiveness. The following result is obtained:

**Tabla 3.** *Relación de los estilos de liderazgo con la efectividad escolar y el estrés laboral.*

Variable	1	2	3	4	5
1. Transformacional	1				
2. Transaccional	.712**	1			
3. Laissez Faire	-.189**	-.126*	1		
4. Estrés laboral	-.291**	-.245**	-	1	
5. Efectividad escolar	.604**	.701**	-.166**	-.230**	1

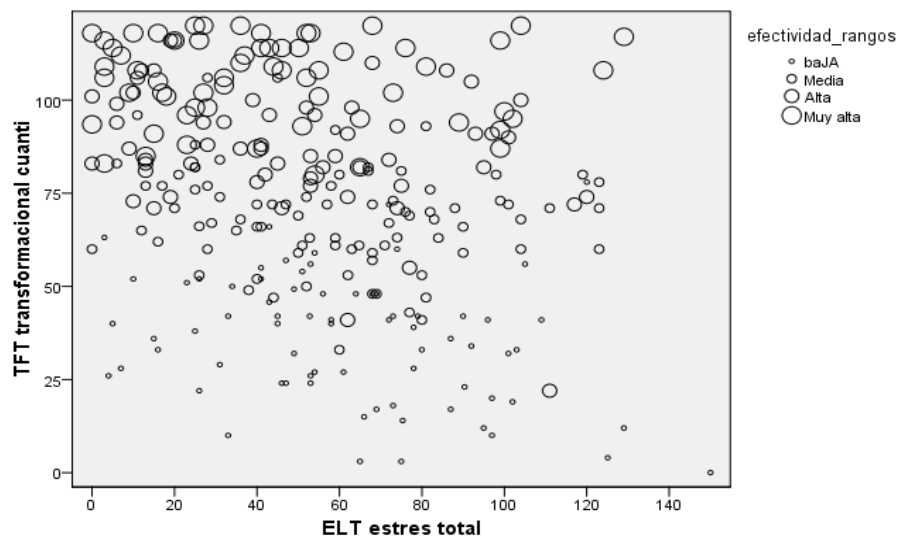
*Fuente:* Elaboración propia

It is evident in the previous table, that the relationship exists between the different types of leadership and is given in a positive way between leadership styles -transformational and transactional-, and inversely proportional of both styles with laissez faire ( $p < 0.05$ ). This confirms several theoretical and empirical studies regarding the relationship between styles of leadership (Avolio and Bass, 2006, Mendoza, 2006, Vázquez, 2013); Regarding the variable effectiveness, it correlates positively with leadership styles-transformational and transactional-and inversely proportional to the leadership style laissez faire ( $p < 0.05$ ). This allows us to infer that, if these leadership styles are present in the directors of the schools studied, the perceived effectiveness of their organizational management will be greater. Regarding work-related stress, this correlates negatively with leadership styles-transformational and transactional-and inversely proportional to laissez-faire leadership style and stress ( $p < 0.05$ ). The negative relationship is more appreciated in the transformational which means that this style can be the most effective in reducing work stress. As proposed by various studies (Harms et al, 2017). A greater presence of both styles (transactional and transformational) reduces work stress, and in the presence of laissez faire increases the work stress in teachers.

Taking into account that transformational leadership is the most proposed by theory as a modulator of work stress (Peiró, 2010; Harms et al, 2017) in the present work, and based

on the behavior of the data (Figure 2), in which it is envisaged that a greater style of transformational leadership, less stress and therefore, at lower stress greater effectiveness, a model is determined that explains, and confirms if this leadership has a moderating effect between perceived work stress, and school effectiveness perceived by the teachers of the basic education schools of Ciudad Guzmán, Jalisco.

**Figura 2.** Relación del liderazgo transformacional, estrés laboral y efectividad escolar percibida.



*Fuente:* Elaboración propia.

After running the model through the process interface, the following results are obtained:



**Tabla 4.** *Modelo de moderación del liderazgo transformacional, el estrés laboral y la eficacia escolar percibida por docentes de escuelas de educación básica de Ciudad Guzmán, Jalisco.*

Modelo	Coeff	se	T	p	LLCI	ULCI
Constante	.038	.092	.419	.675	-.143	.220
Estrés laboral	-.609	.185	-3.29	.001	-.973	-.244
Liderazgo transformacional	.032	.001	26.9	.000	.030	.034
Efectividad	.007	.002	3.22	.001	.003	.012

*Fuente:* Elaboración propia

It is evidenced that there is an indirect effect of the transformational leadership,  $B = .0323$ ,  $SE = .0012$ , 95% CL [.0300, .0347],  $p < 0.05$  between work stress and the perceived effectiveness of teachers of basic education schools of Ciudad Guzmán, Jalisco. The indirect effect of the interaction  $B = .0077$ ,  $SE = .0024$ , 95% CL [.0030, .0124],  $p < 0.05$  and the adjustment of the proposed model is statistically significant ( $p < 0.05$ ) and explains a 74.22% of the variability ( $r^2 = 74.22$ ). Therefore, the work hypothesis is confirmed, and a model of moderation is determined that explains the incidence of transformational leadership in the relationship between work stress and school effectiveness perceived by the teachers under study.

The findings of this research are novel and of vital importance for the development of occupational health in Mexican schools. Scientific contributions must transcend because of their relevance not only at the local level but also regionally and with an impact on Mexican educational policy. The WHO (2010) proposes transformational leadership as the most suitable model for the management of healthy environments in order to guarantee healthy organizations. However, this model of occupational health in Mexico is rarely used and hardly referenced in research, much less in the field educational, a question that seems contradictory since Mexico according to the ILO (2015) is the country that reports more work stress and the educational area together with the health area prevail as the most affected. It is necessary to take into account the importance of work stress and its impact on teaching, its

impact on school effectiveness, efficiency and effectiveness, as well as the incidence of healthy leadership (transformational) to reduce psychosocial risks, and ensure Mexican schools with healthy workers and effective directors. The most representative studies highlight that the risk factors associated with teacher work stress in basic education in Mexico are related to: the workload, role ambiguity, which suggests the relationship with the school authority, and with the rights labor as well, with the working conditions generated by the recent educational reform and new educational model, today also subject to possible changes for political reasons (Saltijeral y Ramos, 2015, Rivero y Cruz, 2010; Rodríguez, 2012).

## **Conclusions**

After analyzing 276 workers from basic education schools in Ciudad Guzmán, it is evident that there is a relationship -negatively and statistically significant- between the style of transformational leadership and perceived teacher work stress. In the same tenor, the negative and significant relationship between work stress and perceived school effectiveness is shown as a finding, according to the management exercised by the school directors of the basic education schools in Ciudad Guzmán, Jalisco, Mexico. Perceived work stress is high, and therefore it is confirmed that the teaching work is stressful, due to social factors such as educational reform, contextual, such as working conditions and knowledge management, as well as new demands that the Globalization demands education. It also shows that women perceive more stress than men. Which opens doors to future studies that take into consideration differences by gender and occupational health teaching. It is shown that the higher the perceived stress, the lower the perception of school effectiveness, therefore, the result supports the need for intervention to reduce work stress and enhance the effectiveness of the schools studied. The transformational leadership is a modulator of work stress and school effectiveness, which shows that directors capable of influencing their workers as models, with an adequate use of charisma and psychological tolerance, as well as a personalized and more humane attitude towards their workers they will guarantee schools that are less affected by work stress, more effective in their social, organizational and, therefore, healthier mission.

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