Burnout in teachers: predictive role of emotional intelligence and humor

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Cite as: Martínez-Álvarez, I., Llamas-Salguero, F., Hidalgo-Fuentes, S. (2024). Burnout in teachers: predictive role of emotional intelligence and humor. *Revista Digital de Investigación en Docencia Universitaria, 18(2)*, e1838. https://doi.org/10.19083/ridu.2024.1838

Received: 17/07/2023. **Revised:** 17/08/2024. **Published** 31/07/2024.

Abstract

Introduction: high levels of stress can cause burnout with negative effects for the person, being more pronounced and frequent in work environments such as teachers. Emotional intelligence and humor style are related to its appearance, duration and intensity. **Objective:** to analyze this syndrome in teachers, as well as the degree of prediction that emotional intelligence and humor styles have on it. **Method:** Cross-sectional predictive design. The sample consists of 196 teachers. **Results:** a relationship was found between aspects of emotional intelligence and humor styles with burnout. The regression analysis showed that emotional regulation partly predict professional burnout and that the evaluation of one's own emotions and affiliative mood explain part of the student-related burnout. **Discussion:** Emotional intelligence, especially that related to the use and regulation of emotions, and adaptive humor style are negatively related and predict less burnout in teachers, so they could benefit from intelligence training. emotion as part of prevention and treatment strategies.

Keywords: Burnout; teacher; emotional intelligence; humor; stress management.

Burnout en docentes: papel predictor de la inteligencia emocional y el humor

Resumen

Introducción: Niveles altos de estrés pueden provocar el burnout con efectos negativos para la persona, siendo más acusado y frecuente en ámbitos laborales como el docente. Asimismo, la inteligencia emocional y el estilo de humor se relacionan con su aparición, duración e intensidad. **Objetivo:** Analizar este síndrome en docentes, así como el grado de predicción que la inteligencia emocional y los estilos de humor tienen en él. **Método:** Se utilizará un diseño de tipo predictivo transversal. La muestra se compone de 196 docentes. **Resultados:** Se encontró una relación entre aspectos de la inteligencia emocional y los estilos de humor con el burnout. El análisis de regresión mostró que la regulación emocional predice en parte el burnout profesional y que la evaluación de las propias emociones y el humor afiliativo explican parte del burnout relacionado con el alumnado. **Discusión:** La inteligencia emocional, especialmente la relacionada con el uso y la regulación de las emociones, y el estilo de humor adaptativo se relacionan de forma negativa y predicen un menor burnout en los docentes, por lo que estos podrían beneficiarse de la capacitación en inteligencia emocional como parte de las estrategias de prevención y tratamiento.

Palabras clave: Burnout; docente; inteligencia emocional; humor; manejo del estrés.

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Introduction

Burnout syndrome can be caused by high levels of stress. In 1986, Maslach and Jackson defined it as an adaptive disorder derived from continuous work stress (Esteras et al., 2014). Its consequences negatively affect individuals, as it is associated with extreme physical, psychic, and emotional fatigue. One of the groups that suffers the greatest stress is professors, which is why it is a cause of great concern within the education system. The education field is changing and advancing rapidly, due, in principle, to social and technological transformations, as well as to legislative reforms. This means that professionals must adapt in order to offer students quality, updated, and functional education that goes beyond the limits of the school environment.

Even though persistent stress is a predictor of this syndrome among professors, there are studies that highlight that this is not the only aspect related to the occurrence of burnout (Pinel-Martínez et al., 2019). Teachers often bear a feeling of great responsibility from getting involved on both a social and emotional level, which can result in burnout if not managed effectively (Iglesias et al., 2018; Philippe et al., 2019; Rodríguez & Fernández, 2012), as well as a lack of motivation, enthusiasm, or emotional stability (Gloria et al., 2013). Education professionals feel compelled to effectively manage their own emotions in order to be competent in their teaching work (Lee & Yin, 2011). Teachers' positive emotions are associated with better teaching and, consequently, with better student learning (Ruzek et al., 2016).

Previous studies in different educational stages ranging from kindergarten to high school have identified that professors feel, on the one hand, that they do not have the necessary training and resources to adequately address student diversity. On the other hand, the conflicts that arise more markedly in the school setting pose another challenge that, on occasions, overwhelms them (Castillo et al., 2017). These situations, when paired with a lack of social support and rewards, can lead to burnout syndrome (Díaz & Gómez, 2016). Suffering high levels of burnout over time leads to negative consequences, both professionally and personally (Skaalvik & Skaalvik, 2011). However, research has focused to a greater extent on studying burnout in other fields such as healthcare, with a long way to go in the education setting due to its recent incorporation as an affected field (Mónico et al., 2018).

The still scarce research focused on professors reveals a difficulty in the interpretation and diagnosis of burnout among them. Mainly, the focus has been on personal (age, family situation), psychological (motivation, emotional intelligence), and academic-professional (volume of students, subjects) variables that are related to this syndrome (Castillo et al, 2017; Mónico et al., 2017; Pena & Extremera, 2012). The results have been, to some extent, disparate. This could be related to the use of different scales when assessing burnout in the teaching context.

Emotional intelligence, according to Mayer et al. (2016), is the competence to feel, express, and understand emotions, both one's own and others'. High levels of emotional intelligence are associated with many personal and socioemotional benefits. In addition, its effect in reducing work-related stress and, therefore, burnout syndrome has been studied (Extremera et al., 2007). Studies of the relationship between emotional skills and this syndrome have boomed in recent years. Some authors such as Schoeps et al. (2021) have found a negative and significant association between mood clarity and emotional repair with burnout, mediated by negative affect. Teachers themselves recognize that the dimensions of emotional intelligence are an effective resource when performing optimally and, therefore, promote a physically and psychologically healthy work environment (Cejudo & López-Delgado, 2017; Federici & Skaalvik, 2012). Hence the need to study the impact of this type of intelligence in education, as well as to promote training aimed at its development in professors (Hopman et al., 2018). Teachers who are able to understand, express, and regulate emotions effectively feel more competent to achieve work-related goals, engage effectively with the different actors in the educational community, generate a positive environment in the classroom, and reduce their level of mental and emotional exhaustion (García-

Arroyo & Segovia, 2018; Vergara et al., 2015). Although some research has focused on the relationship between emotional intelligence and burnout syndrome, there are still few studies that analyze the psychological processes that support this association. This is why recent studies (Schoeps et al., 2021) have begun to point out the importance of reflecting on the specific emotional skills that affect the dimensions of burnout in order to develop effective interventions.

Humor is considered an optimal emotional tool to effectively manage work stress, but it has still been little studied (Liao et al., 2020). Humor can serve as a mechanism for coping appropriately with emotions and enhancing personal well-being by improving physical, psychological, or emotional health (Liao et al., 2020; Martín, 2001). Humor is multifactorial and involves cognitive, physical, socioemotional, and behavioral aspects. There are different styles of humor, which can be classified into two maladaptive types (aggressive and self-defeating) and two adaptive ones (affiliative and self-enhancing) (López et al., 2019; Torres-Marín et al., 2018). Within the adaptive humor styles, the affiliative one involves joking in a positive and socially friendly way, while the self-enhancing one involves having a humorous view of life, using humor to cope with negative emotions. As for maladaptive styles, the aggressive one involves the use of humor as a means of criticism, using jokes to tease others, and the self-denigrating one involves using humor to belittle oneself and to hide one's true emotions. Authors such as Yin et al. (2017) or Liao et al. (2020) found that the two optimal types were positively related to effectiveness in managing emotional skills in the teaching setting at all educational stages and that, therefore, it is essential to advance training among professionals to develop a positive humor style.

In view of the lack of a solid and extensive research on burnout among professors and the variability of the results from previous studies, the main objective of this work focuses on the analysis of this syndrome in professors of all non-university educational stages in Spain, as well as the degree of prediction that emotional intelligence and humor styles have on professor burnout.

Method

Participants

The sample for this study was selected by convenience sampling and consisted of 196 professors of kindergarten, primary, secondary, upper secondary (*bachillerato*), and/or vocational training (*formación professional*) in Comunidad Autónoma de Extremadura 77.8% women). The mean age of the participants was 43.39 (*SD* = 10.61) and the mean length of teaching experience was 17.12 years (*SD* = 11.05). For males, the mean age was 44.60 (*SD* = 9.71) and the mean length of teaching experience was 17.02 years (*SD* = 11.30), while for females the mean age was 42.98 (*SD* = 10.86) and the mean length of teaching experience reached 17.24 years (*SD* = 11.06). During the 2022-2023 academic year, the number of professors in Extremadura at the different pre-university levels was 15,893, so, with a sample of 196 and a confidence level of 90%, the margin of error of the study is ±5.83%.

Instruments

Sociodemographic questionnaire. It was used to evaluate the characteristics of the sample (gender, age, educational level(s) taught, years of teaching experience and years of service at their current center).

Copenhagen Burnout Inventory (CBI). Burnout in professors was measured using the CBI (Kristensen et al., 2005), adapted to the Spanish population by Molinero-Ruiz et al. (2013). The CBI assesses burnout through 19 items divided into three subscales: personal burnout (6 items, *e.g., How often are you physically exhausted?*), work-related burnout (7 items, *e.g., Do you feel exhausted at the end of your workday?*), and client-related burnout (6 items, e.g., *Do you feel that you give more than you receive when working with clients or customers?*). The questionnaire was adapted to the subjects of the present investigation by changing in the client-related burnout subscale the terms clients or customers for the term students, similar to the study by Piperac et al. (2021). To confirm the factor structure of the CBI after adaptation, a confirmatory factor analysis was carried out. The results obtained after attending to the modification indexes suggested

by the program indicate an acceptable fit of the model. The Comparative Fit Index (CFI) was .923, which suggests a good fit of the proposed model. Complementarily, the Tucker-Lewis Index (TLI) obtained a value of .908, also indicating an adequate fit. The root mean squared error of approximation (RMSEA) was .080 (90% CI = .068; .091), which is considered a reasonable fit. The items were answered through a five-point Likert scale, from 0 (*Never*) to 4 (*Always*), where the range of the personal burnout and client-related burnout subscales are between 0 and 24 points, and the range of the work-related burnout subscale is between 0 and 28 points, with higher scores implying higher levels of burnout. The internal consistency coefficients of the personal burnout, work-related burnout, and client-related burnout subscales for this study were α = .92 (95% CI = .90; .93), α = .79 (95% CI = .74; .83), and α = .82 (95% CI = .78; .86), respectively.

Wong Law Emotional Intelligence Scale (WLEIS). Emotional intelligence was assessed through the WLEIS (Wong & Law, 2002), adapted to Spanish by Extremera et al. (2019). The WLEIS consists of 16 items divided into four subscales: assessment of one's own emotions (4 items, e.g., I have a good understanding of my own emotions.), assessment of others' emotions (4 items, e.g., *I have a good understanding of the emotions of the people around me.*), use of emotions (4 items, e.g., *I always encourage myself to do my best.*), and emotion regulation (4 items, e.g., *I can calm down easily when I feel angry.*). The items were answered using a seven-point Likert scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*), where scores for each of the subscales ranged from 4 to 28 points, while the total test score ranged from 16 to 112 points, with higher scores being understood to imply higher levels of emotional intelligence. For this study, the overall reliability of the scale was α = .91, while the subscales of assessment of one's own emotions, assessment of others' emotions, use of emotions, and emotion regulation presented internal consistency values of α = .87 (95% CI = .84; .90), α = .85 (95% CI = .81; .88), α = .89 (95% CI = .86; .91), and α = .89 (95% CI = .86; .91), respectively.

Humor Styles Questionnaire (HSQ). Humor styles were assessed with the HSQ (Martin et al., 2003), adapted to Spanish by Torres-Marín et al. (2018). The HSQ consists of 32 items divided into four subscales: affiliative humor (8 items, e.g., *I laugh and joke a lot with my closest friends.*), self-enhancing humor (8 items, e.g., *Even when I am alone, I usually have fun with the absurd things in life.*), aggressive humor (8 items, e.g., *If someone makes a mistake, I usually make fun of that person for it.*), and self-defeating humor (8 items, e.g., *I often try to please people or try to make them accept me more by saying funny things about my shortcomings, limitations, or mistakes.*). The items are answered on a seven-point Likert scale from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*), where the range of the different subscales was between 8 and 56 points, with higher scores reflecting a higher level in the different styles of humor. The internal consistency of the affiliative humor scale was α = .85 (95% CI = .82; .88), that of self-enhancing humor was α = .77. (95% CI = .72; .82), that of aggressive humor was α = .66 (95% CI = .58; .73), and that of self-defeating humor was α = .81 (95% CI = .77; .85).

Procedure

One of the authors of the study contacted the principals of different schools and institutes by e-mail and telephone and asked them to invite their professors to participate in the research. The tests were administered using Google Forms. A link to the form was sent to the professors by e-mail along with a description of the study and its objectives. Once the participants accessed the form, the first page presented them with information about the study, indicating its voluntary and anonymous nature, since no data that could identify the participants was collected. Before starting to complete the tests, participants had to give their consent to participate in the research by means of a specific item created for this purpose. Participants did not receive any incentive.

Data Design and Analysis

The research was designed as a cross-sectional, predictive study (Ato et al., 2013). First, a confirmatory factor analysis of the Copenhagen

Burnout Inventory was performed with the aim of examining its factor structure after the modifications made to the scale, analyzing the fit indices according to the criteria proposed by Brown (2015). Subsequently, the descriptive statistics were calculated and the normality of the scores of the different variables were examined using the Kolmogorov-Smirnov test. Since none of the variables included in the study followed a normal distribution, the association between the different variables was evaluated through Spearman correlations, which estimate the monotonic relationship between them. Finally, in order to examine the predictive role of emotional intelligence factors and humor styles on professors' personal, work-related, and student-related burnout, three multiple linear regression analyses were performed. Before performing the regression analyses, the necessary assumptions were checked. Linearity was checked with partial scatter plots for each independent variable; homoscedasticity, with the Levene's test; normality of residuals, with the Kolmogorov-Smirnov test; and independence of residuals, with the Durbin-Watson test. Finally, the presence of multicollinearity was ruled out, since all the variance inflation values were within the recommended limits.

Statistical analyses were carried out using the SPSS statistical package (version 28) and the JAMOVI program.

Results

Table 1 shows the descriptive statistics and the skewness and kurtosis indices.

Table 2 shows the associations between the variables in the study evaluated through Spearman correlations. As can be seen, the three types of burnout evaluated present correlations of positive sign and high intensity according to the classic criteria of Cohen (1988). With regard to the association between the factors of emotional intelligence and burnout, it can be observed how the assessment of one's own emotions, the use of emotions and emotion regulation show negative correlations with the three types of burnout, while the assessment of others' emotions shows correlations with work-related and student-related burnout, but not with personal burnout. In relation to humor styles, aggressive humor shows a positive correlation with student-related burnout, and self-defeating humor also shows positive correlations with both work-related and student-related burnout.

To evaluate the predictive capacity of emotional intelligence and humor styles on burnout, three multiple linear regression analyses were carried out, taking the types of burnout studied as the dependent variable in each one of them. Regarding personal burnout, the only variable included in the model was self-

Table 1
Descriptive Statistics, Skewness, and Kurtosis

	M	SD	Skewness	Kurtosis
Personal burnout	10.85	5.1	0.213	-0.494
Work-related burnout	11.13	4.94	0.715	0.145
Student-related burnout	7.94	4.67	0.437	-.0319
Affiliative humor	41.57	9.07	-0.306	-0.734
Self-enhancing humor	36.66	7.52	-0.367	0.617
Aggressive humor	17.48	6.49	1.108	2.582
Self-defeating humor	25.16	9.29	0.525	-0.038
Assessment of one's own emotions	23.22	3.61	-1.426	4.266
Assessment of others' emotions	22.4	3.54	-1.283	3.313
Use of emotions	21.36	4.68	-1.057	1.586
Emotion regulation	20.6	3.79	-0.890	1.480

defeating humor (β = -.186), which explained 10.3% of the variance of this type of burnout.

As for work-related burnout, emotion regulation (β = -.19) was shown as the only predictor variable, explaining a total of 8.1% of the variance. Finally, assessment of one's own emotions (β = -.254) and affiliative humor (β = .141) were found to be predictors of student-related burnout, explaining 7.5% of its variance. In models in which more than one predictor variable was obtained, the presence of collinearity was ruled out when the values of tolerance were above 0.1 and variance inflation values were below 10, following the criteria of O'Brien (2007). The Durbin-Watson test showed values between 1.78 and 2.22, so it can be considered that the measurement errors of the different explanatory variables are independent of each other.

Table 2
Correlaciones bivariadas

	1	2	3	4	5	6	7	8	9	10	11
1. Personal burnout	-										
2. Work-related burnout	.63**	-									
3. Student-related burnout	.46**	.65**	-								
4. Affiliative humor	-.01	.01	.10	-							
5. Self-enhancing humor	-.04	-.04	-.08	.06	-						
6. Aggressive humor	-.01	.09	.19**	.01	.01	-					
7. Self-defeating humor	.14	.15*	.15*	.05	.33**	.50**	-				
8. Assessment of one's own emotions	-.20**	-.18*	-.29**	.01	.18*	-.20**	-.20**	-			
9. Assessment of others' emotions	-.05	-.21**	-.18*	.03	.20**	-.30**	-.21**	.45**	-		
10. Use of emotions	-.20**	-.18*	-.18*	.02	.32**	-.18*	-.15*	.55**	.40**	-	
11. Emotion regulation	-.22**	-.22**	-.15*	.04	.22**	-.20**	-0.12	.48**	.34**	.46**	-

*Note: *p <.05; ** p <.01*

Table 3
Multiple Linear Regression of Emotional Intelligence and Humor Styles on Personal, Work-Related, and Student-Related Burnout

	Personal Burnout		Work-related burnout		Student-related burnout	Burnout alumnos
Variables	β	**Variables**	β	**Variables**	β	
Affiliative humor	.011	Affiliative humor	.041	Affiliative humor	.141*	
Self-enhancing humor	-.021	Self-enhancing humor	.084	Self-enhancing humor	-.002	
Aggressive humor	-.149	Aggressive humor	-.012	Aggressive humor	.028	
Self-defeating humor	.186*	Self-defeating humor	.051	Self-defeating humor	.045	
Assessment of one's own emotions	-.144	Assessment of one's own emotions	.026	Assessment of one's own emotions	-.254*	
Assessment of others' emotions	.072	Assessment of others' emotions	-.110	Assessment of others' emotions	-.013	
Use of emotions	-.139	Use of emotions	-.160	Use of emotions	-.006	
Emotion regulation	-.151	Emotion regulation	-.193*	Emotion regulation	-.035	

*Note: *p <.05; ** p <.01; *** p <.001*

Discussion

Burnout syndrome has been researched by several authors in recent years, such as Iglesias et al. (2018), Delgado et al. (2019), Taris (2022), and Schoeps et al. (2021). According to these studies, burnout can be considered a public health problem, as it significantly affects the quality of life of workers and can trigger serious physical as well as mental health consequences. Teaching is considered one of the most stressful jobs due to the psychological and emotional demands of the profession. According to studies by Delgado et al. (2019) and Phillipe et al. (2019), professors experience high levels of work-related stress due to factors such as work overload, lack of resources and support, lack of control in their work environment, and exposure to emotionally demanding situations, including interpersonal conflicts and disciplinary problems. In addition, professors also face increasing pressures to meet higher educational standards and evaluate student performance. All of this can contribute to emotional exhaustion, alienation, and professional burnout, which are components of burnout syndrome in professors (Iglesias et al., 2018). One of the most prominent studies on burnout in professors is the one conducted by García-Carmona et al. (2021), who found that 44% of the professors surveyed presented such syndrome. The results of this study suggest that the COVID-19 pandemic has increased the risk of developing burnout in professors, due to changes in education settings and work overload. These findings were already noticed in previous studies, such as the one conducted by Bravo et al (2022), where a high degree of emotional exhaustion (93.4%), low personal fulfillment (84.9%), and depersonalization (66.4%) was detected in professors during the pandemic. This is why this study analyzed this syndrome in professors of all non-university educational stages, as well as the degree of prediction that emotional intelligence and humor styles have on professor burnout.

A prominent author in recent years is Taris (2022), who proposes a more complex perspective of burnout, considering not only work-related factors, but also personal and social factors that may influence its development. According to Taris (2022), this syndrome is the result of a dynamic process between work-related factors, personality traits, and personal experiences of each individual.

The fact that some factor of emotional intelligence has been shown to be a predictor of the three types of burnout analyzed is consistent with the scientific literature. According to researchers such as Schoeps et al. (2021), professors with higher emotional intelligence are less likely to suffer burnout, as they can better manage their emotions and work demands. There are studies that suggest that professors' positive emotions can have a positive impact on the quality of their teaching and, consequently, on student learning. Likewise, in the study published by Brackett et al. (2019), professors who experience positive emotions, such as happiness, satisfaction, and gratitude, are more likely to show high-quality teaching practices, which include encouraging active student participation and personalizing learning. In addition, it has been observed that professors' experience of positive emotions is associated with greater motivation and engagement in their work, which also contributes to improving the quality of their teaching (Pinel-Martínez et al., 2019). Other recent studies, such as those conducted by Granados et al. (2020) and Pérez-Fuentes et al. (2021), found that professors who presented higher levels of emotional intelligence also showed lower levels of burnout, thus supporting the previously established relationship between emotional intelligence and burnout in professors.

On the other hand, the relationship between professors' humor styles and burnout has also been researched. In a study by Hu et al. (2021), it was found that the use of positive humor styles such as affiliative humor can help reduce burnout in professors. In addition, positive humor styles are also related to psychological resilience (Yağan & Kaya, 2023), which is an important factor in reducing the effects of stress and burnout experienced by professors. In line with the findings of this work, other studies such as that of Anello et al. (2009) have shown that self-defeating humor may be a relevant factor in explaining burnout syndrome, acting as a significant predictor. This type of humor implies that professors underestimate themselves, which

can be interpreted as a form of defensive denial to hide negative emotions. Likewise, self-defeating humor is related to low self-esteem (Vaughan et al., 2014), a variable that, in turn, is a risk factor for burnout among professors from different cultures (Bayani & Baghery, 2020; Méndez et al., 2020; Pereira et al., 2021). Thus, we can indicate that self-defeating humor has been related both to work-related and student-related burnout. Authors such as Guglielmi et al. (2020) have found that this type of humor is related to low self-efficacy and a negative perception of work, which may increase the risk of suffering work-related burnout. In addition, self-defeat can reinforce negative stereotypes about professors and generate an environment of disrespect and dissatisfaction in students, which increases the risk of professors suffering student-related burnout. However, in the present study, only affiliative humor was shown to be a significant predictor of burnout related to students, which may seem contradictory to previous results. A possible explanation is that professors who present higher levels of burnout try to use this style of humor to improve interpersonal relationships with students. As shown in the correlation analyses carried out in this research, and in line with studies by authors such as Martín and Lajo (2021), aggressive humor in the classroom has presented a positive correlation with student-related burnout. This type of humor can generate a negative and hostile environment in the classroom, which can be a source of stress for professors and, in the long term, increase the risk of burnout.

The results found should be interpreted considering certain limitations. First, convenience sampling limits the generalizability of the results. In view of that, future research would benefit from using probability sampling. Likewise, the fact that the design is cross-sectional means that it is not possible to assess the evolution of the variables over time, so longitudinal studies should be carried out to examine this aspect.

Burnout syndrome continues to be a major problem in the workplace, especially in professors (Liao et al., 2020). To prevent it, institutional support and greater attention to the mental health of workers are essential. The results of this study show how emotional intelligence, especially that related to the use and regulation of emotions, is negatively related to and predictive of lower levels of burnout in professors, so professors could benefit from training in emotional intelligence as part of burnout prevention and treatment strategies.

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