

Association Between Burnout Syndrome, Lifestyle, Anxiety, and Perfectionism Among Elementary School Teachers

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Abstract

This cross-sectional study analyzed the association between perfectionism, anxiety, lifestyle and burnout of 245 Brazilian teachers. The instruments were Hamilton Anxiety Scale, Individual Lifestyle Profile, Multidimensional Perfectionism Scale, and Questionnaire for the Evaluation of Burnout Syndrome at Work. Data analysis was conducted through Kolmogorov-Smirnov, Spearman correlation and Path Analysis ($p < 0.05$). The results showed self-oriented perfectionism and the social relationship showed association with illusion for work. Mental exhaustion was associated with stress control, social relationship, physical activity and anxiety, while indolence demonstrated association with social relationship, other-oriented and socially-prescribed perfectionism, and anxiety. Lifestyle (stress control, physical activity) and socially-prescribed perfectionism were associated with guilt. It was concluded that changes in teachers' lifestyles and perfectionism can be an intervening factor to reduce symptoms of burnout.

Keywords: lifestyle, perfectionism, emotional exhaustion, anxiety disorder.

Associação Entre a Síndrome de Burnout, o Estilo de Vida, Ansiedade e Perfeccionismo Entre Professores do Ensino Fundamental

Resumo

Esse estudo transversal que analisou a associação entre perfeccionismo, ansiedade, estilo de vida e esgotamento de 245 docentes brasileiros. Os instrumentos foram a escala de ansiedade de Hamilton, o perfil do estilo de vida individual, da escala de perfeccionismo multidimensional e o questionário para a avaliação da síndrome de *burnout* no trabalho. A análise de dados foi feita através de Injeção-Smirnov, correlação de Spearman e análise de rota ($p < 0,05$). Os resultados mostraram perfeccionismo autodirigido e a relação social mostrou associação com a ilusão para o trabalho. O esgotamento mental associado com o controle do estresse, as relações sociais, a atividade física e a ansiedade, enquanto a indolência demonstrou associação com a relação social, o perfeccionismo, orientado para os outros e socialmente prescrito, e a ansiedade. Estilo de vida, controle do estresse, atividade física) e perfeccionismo socialmente prescrito associado com a culpa. Concluiu-se que mudanças no estilo de vida e no perfeccionismo dos professores podem ser fatores intervenientes para a redução dos sintomas de *burnout*.

Palavras-chave: estilo de vida, perfeccionismo, esgotamento emocional, transtorno de ansiedade.

Asociación entre Síndrome de Burnout, Estilo de Vida, Ansiedad y Perfeccionismo entre profesores de la Escuela Primaria

Resumen

Ese estudio transversal analizó la asociación entre perfeccionismo, ansiedad, estilo de vida y el desarrollo de 245 docentes brasileños. Los instrumentos fueron la escala de ansiedad de Hamilton, el perfil de estilo de vida individual, la escala de perfeccionismo multidimensional y un cuestionario para evaluar el síndrome de *burnout* durante el trabajo. El análisis de datos se realizó con Inyección de Smirnov, correlación de Spearman y análisis de ruta ($p < 0.05$). Los resultados mostraron perfeccionismo autodirigido y la relación social mostró una asociación con la ilusión para el trabajo. El agotamiento mental se asocia con el manejo del estrés, las relaciones sociales, la actividad física y la ansiedad, mientras que la indolencia demostró una asociación con las relaciones sociales, el perfeccionismo, dirigido a otras personas y prescrito socialmente, y la ansiedad. Estilo de vida, control del estrés, actividad física y perfeccionismo socialmente prescrito se asocian con la culpa. Se concluye que los cambios en el estilo de vida y el perfeccionismo de los profesores pueden ser factores intervenientes para la reducción de los síntomas de *burnout*.

Palabras clave: estilo de vida, perfeccionismo, agotamiento emocional, trastorno de ansiedad.

Data from the Anísio Teixeira National Institute of Educational Studies and Research's school census showed, in 2018, that more than two million teachers were working in Brazilian basic education, being that 1.4 million of whom were working with elementary education (Ministry of Education, 2018). The main reasons for medical work excuses among these basic education teachers have been anxiety, stress and depression, as confirmed by a survey released by the National Confederation of Workers in Education¹. These problems are influenced by aspects related to the work environment, such as the high workload (Sinott, da Rosa Afonso, Ribeiro, & Farias, 2014), student-related difficulties (Gomes, Silva, & Silva, 2010; Koga et al., 2015), working time (Souza & Costa, 2011), lack of structure/physical space and violence in schools (Pereira, Teixeira, Andrade, Bleyer, & Lopes, 2014; Silveira, Enumo, & Batista, 2014), the lack of pedagogical resources, non-active leadership (Moreira, Collet, Farias, & Nascimento, 2008) and the devaluation of the teacher role, both socially and economically (Gomes et al., 2010).

In addition, professionals such as teachers, who constantly deal with people, in a direct and emotional manner, are more likely to develop burnout syndrome (Maslach, Schaufeli, & Leiter, 2001). In Brazil, Burnout syndrome is recognized as an occupational disease by the Decree-Law 6042/07, of Social Security, included in Group V List B, of the International Classification of diseases-CID 10 (Organization, 2010). Burnout can be understood as a response to prolonged and excessive exposure to stress, generating a state of physical, mental and emotional exhaustion (Ghanizadeh & Jahedizadeh, 2015).

As consequences of this syndrome, we find a tendency towards social isolation, reduction of cognitive performance, memory impairment and anxiety (Creedy, Sidebotham, Gamble, Pallant, & Fenwick, 2017; Govêia et al., 2018; Kaschka, Korczak, & Broich, 2011; Queiros et al., 2016). Symptoms such as anger, low job satisfaction, fatigue, absenteeism, guilt and even physical symptoms such as headaches, high blood pressure, gastrointestinal discomfort and both weight gain and loss (Bataineh & Alsagheer, 2012; Iancu, Rusu, Măroiu, Păcurar, & Maricuțoiu, 2018) can also manifest due to burnout. This syndrome can also reduce teacher's empathy with the students (De Stasio, Fiorilli, Benevene, Uusitalo-Malmivaara, & Chiacch, 2017), reduce performance at work (Koutsimani, Anthony, & Georganta, 2019) and increase the will to drop out the career (Kim & Kao, 2014).

Burnout is caused by the combination of individual, organizational and social factors (David & Quintão, 2012). In general, individual factors include socio-demographic characteristics and psychological factors such as perceived self-efficacy, locus of control, self-esteem, motivation, empathy, and one's personality. Examples of organizational and social factors are the number of children, number of work hours, the existence of time constraints, the skill to work, job satisfaction, and the interpersonal relationships developed in that specific context (Maslach et al., 2001).

An international systematic review of teachers' burnout factors has shown that contextual factors have received higher attention from researchers, with self-efficacy and personality (Big-5) being the main individual factor investigated (Ghanizadeh & Jahedizadeh, 2015). In Spain, a review has highlighted a predominance of socio-demographic variables (94.4%) associated with burnout symptoms, with emphasis on the influences of sex, age and teacher experience (Martínez, del Carmen Pérez-Fuentes, & Martínez, 2019). In Brazil, higher focus has been directed towards understanding sociodemographic and contextual variables, with coping strategies being the main

studied psychological factor (Dalcin & Carlotto, 2017).

Therefore, we see the existence of a gap in the understanding of burnout syndrome's relationship with anxiety, one of the main problems reported by elementary education teacher (Ministry of Education, 2018), and a widely studied relationship in other work context (Koutsimani, Anthony, & Georganta, 2019). In addition, few studies have investigated the influence of an individual factor on burnout, such as perfectionism (Hill & Curran, 2016).

Furthermore, the occurrence of lifestyle-related diseases is also one of the main reasons of absence from teaching activities, such as hypokinetic diseases (Bambula, Sánchez, & Arévalo, 2012; Batista, Carlotto, Coutinho, & Augusto, 2010). These diseases may be related to the high prevalence of inadequate eating habits, physical inactivity and alcohol consumption already observed in teachers (Both, 2008; Both, do Nascimento, & Borgatto, 2007). In this sense, the practice of physical activity is an important element of lifestyle for the maintenance of these workers' physical and mental health, which is also supported by a systematic review showing an inverse relationship between physical activity and both the teachers' mental wear and burnout propensity (Ferreira et al., 2015).

Finally, understanding the process of teachers' ailing, its meaning and consequences, through the relationships between individual and environmental variables, constitutes an important measure to deepen our knowledge about burnout and thus allowing for the development of effective alternatives for ill prevention and health promotion in the educational context. In this sense, present study aimed to fill the gap in the literature associating individual and environmental factors with the appearance of burnout syndrome in teachers by analyzing the association of anxiety, perfectionist traits and lifestyle with the dimensions of burnout from elementary education teachers of Juazeiro-BA, Brazil.

Method

Participants

This cross-sectional study was composed by 245 teachers (203 women and 42 men), from 26 municipal and state schools in the city of Juazeiro-BA, Brazil. Participants worked at initial ($n=136$) and final ($n=109$) series of elementary education. Teachers had mean age of 41.57 ± 9.35 years, being 15.74 ± 8.38 years in the profession and have been working in schools for 30.09 ± 7.18 months. Participants were selected non-probabilistically, by convenience, and in accordance with the following criteria: 1) be a public-school teacher under either a contract or permanent regimen in the basic education; and 2) Have at least 02 years of working experience as a faculty member; 3) Read and sign the informed consent term.

Instruments

Sociodemographic questionnaire. Sociodemographic data were collected by means of a questionnaire prepared by the researchers with questions concerning personal characteristics, level of education, monthly income, working time, working time in current school, type of contract and number of children in class.

Hamilton Anxiety Scale. The scale has 14 items, answered on a four-point Likert scale, distributed across two dimensions, being seven items related to anxious mood symptoms and seven items related to physical symptoms. The result of this scale ranges from zero to 56, with higher scores indicating higher levels of

anxiety (Hamilton, 1959).

Questionnaire for occupational Burnout syndrome assessment (CESQT-PE). The instrument was validated for Brazilian education professionals (Gil-Monte, Carlotto, & Câmara, 2010). The CESQT-PE consists of 20 items distributed across four dimensions: illusion for work, mental exhaustion, indolence, and guilt. The items are answered on a five-point Likert scale, ranging from 0 (never) to 4 (very frequently).

Multidimensional Scale of Perfectionism (EMP). The instrument was developed by Hewitt and Flett (1991) and has been validated for the Portuguese language Soares, Gomes, Macedo, and Azevedo (2003), it consists of 45 items and evaluates the personal and social components of perfectionism, from a theoretical model that postulates three dimensions of perfectionism: self-oriented perfectionism; other-oriented perfectionism; and socially prescribed perfectionism. The items are answered by means of a Likert scale ranging from 1 (I completely disagree) to 7 (I completely agree).

Individual Lifestyle Profile (PEVI). The instrument was developed by Nahas, Barros and Francalacci (2000), and consists of 15 items spread over five domains: food, physical activity, preventive behavior, social relationships and stress control. The questions are answered by means of a Likert-type scale of 3 points in a continuum from 0 (zero) to 3 (three). Higher scores indicate an individual's more positive attitude in the assessed domain.

Data Collection Procedures and Ethical Considerations

The research project was approved by the Ethics Committee under opinion no. 2.570.545/2018, in accordance with the rules of the Resolution 466/12 of the National Health Council on research involving humans; the study also followed the principles of the declaration of Helsinki. In order to collect data, we requested and obtained an authorization of the Municipal Secretariat of Education of Juazeiro-BA and the Secretariat of Education of the state of Bahia. Then, a date was set for the consent term presentation and instruments' application on an individual basis. Data collection took place in the teachers' workplace, with pre-arranged schedules and in a private room. Answering to the questionnaires lasted approximately 30 minutes. The order of the questionnaires was randomized among participants.

Data Analysis Procedures

The preliminary analysis of the data was carried out through the Kolmogorov Smirnov normality test. Spearman's correlation coefficient was used to verify the correlation between variables. The adopted significance was $p < 0.05$. Such analyses were performed on the SPSS 23.0 software. To verify the percentage Burnout dimensions' variance explained by anxiety, perfectionism and lifestyle, different models of Path Analysis were conducted through structural equation modelling with variables that obtained significant correlations ($p < 0.05$).

The existence of outliers was evaluated by the square distance of Mahalanobis (DM2) and the univariate normality of the variables was evaluated by the asymmetric coefficients ($ISKI < 3$) and uni and multivariate kurtosis ($IKuI < 10$). As the data did not show normal distribution, Bollen-Stine Bootstrap technique was used to correct the value of coefficients estimated by the maximum likelihood method (Marôco, 2010) implemented in AMOS software version 18.0. To check the suitability of the sample for the proposed analysis, we applied the Bootstrapping technique (MacCallum, Browne, & Sugawara, 1996). No DM2 values indicating the existence of outliers were

observed, nor were there sufficiently strong correlations between the variables indicating multicollinearity (Variance Inflation Factors $< 5,0$). Based on Kline's recommendations (Kline, 2015), the interpretation of regression coefficients was as follows: small effect for coefficients < 0.20 , medium effect for coefficients up to 0.49 and strong effect for coefficients > 0.50 ($p < 0.05$).

Results

For the sociodemographic characterization of the sample, it was found that most of these teachers (55.5%) were allocated in the initial series of elementary education, and 44.1% were allocated in the final series of elementary education. Most teachers were female (82.9%), married (56.7%), Catholic (55.5%) and had children (73.8%). Most of them were part of the school's permanent staff (53.5%) and worked 40 hours a week (64.5%), a large part had a minimum wage range of 3 to 6 minimum salaries (41.6%) and 55.5% had specialized training.

Analyzing the correlation matrix of the studied variables (Table 1) it was observed that illusion for work was related to the self-oriented perfectionism ($r = 0.15$) and to social relationships ($r = 0.14$). Mental exhaustion was positively related to anxiety ($r = 0.56$) and inversely related to lifestyle domains of physical activity ($r = -0.27$), social relationships ($R = -0.27$) and stress control ($r = -0.25$). Indolence had a positive relationship with anxiety ($r = 0.37$) and socially prescribed perfectionism ($r = 0.26$), and negative with others-oriented perfectionism ($r = -0.22$) and social relationships ($R = -0.16$). Guilt had a positive relationship with anxiety ($r = 0.34$) and socially prescribed perfectionism ($r = 0.14$), and a negative relationship with physical activity ($r = -0.15$) and stress control ($r = -0.16$).

Looking at the predictive relationships between anxiety, perfectionism, lifestyle and teachers' burnout indicators, we observed, Model 1 (M1-Figure 1), that self-oriented perfectionism ($\beta = 0.12$) and social relationships ($\beta = 0.15$) significantly explained 4% of illusion for work's variability. Model 2 (M2 - Figure 2) revealed that mental exhaustion had its variance explained in 33% by anxiety ($\beta = 0.51$) and physical activity ($\beta = -0.12$), while stress control and social relationship did not present significant relationships.

Model 3 (M3 - Figure 3) revealed that teachers' indolence was associated with anxiety ($\beta = 0.24$) and others-oriented perfectionism ($\beta = -0.15$), representing 12% of their variance. Social relationships and socially prescribed perfectionism did not show significant associations. Model 4 (M4-Figure 4) revealed that anxiety ($\beta = 0.29$) was the main predictor of these teachers' guilt, explaining its variance in 11%. Meanwhile stress control, physical activity and socially prescribed perfectionism did not present statistically significant paths ($p > 0.05$).

Discussion

This study aimed to analyze the association between lifestyle, anxiety, perfectionist traits and burnout dimensions among elementary education teachers from Brazil. Given the individuality of each burnout dimension and considering that they might not necessarily be manifested at the same time, each dimension has been analysed separately. Our results have shown that anxiety was related to higher levels of all three negative burnout dimensions (mental exhaustion, indolence and guilt). Lifestyle components, mainly social relationships and physical activity have had adaptive (or beneficial) effects for burnout indicators; while perfectionism, depending on its adaptive or maladaptive nature, can improve the illusion for work or increase

Table 1
Correlation matrix of anxiety, perfectionism, lifestyle and burnout of basic education teachers from Juazeiro-BA.

Variables	\bar{x} (sd)	2	3	4	5	6	7	8	9	10	11	12	13
1. Anxiety	11.62 (9.87)	0.04	0.27*	-0.09	-0.18*	-0.28*	-0.02	-0.31*	-0.39*	0.02	0.56*	0.37*	0.34*
2. self-oriented perfeccionism	79.75 (18.90)		0.43*	-0.04	0.03	0.04	-0.05	0.06	-0.16*	0.15*	-0.06	-0.04	0.02
3. socially-prescribed perfeccionism	47.16 (12.27)			-0.27*	-0.08	-0.04	-0.10	-0.11	-0.17*	0.01	0.12	0.26*	0.14*
4. other-oriented perfeccionism	43.05 (8.70)				0.08	-0.01	0.09	0.16*	0.02	0.11	-0.12	-0.22*	-0.01
5. Food	1.50 (0.69)					0.37*	0.32*	0.20*	0.33*	-0.04	-0.01	-0.04	0.06
6. Physical activity	1.05 (0.86)						0.24*	0.32*	0.33*	0.01	-0.27*	-0.11	-0.15*
7. Preventive Behavior	1.79 (0.66)							0.16*	0.21*	0.09	0.10	0.09	0.08
8. Social relationship	2.04 (0.71)								0.35*	0.14*	-0.27*	-0.16*	-0.10
9. Stress control	1.62 (0.70)									0.10	-0.25*	-0.08	-0.16*
10. Ilusion for work	2.89 (0.70)										-0.10	-0.09	0.07
11. Mental exhaustion	1.53 (0.97)											0.60*	0.41*
12. Indolence	0.79 (0.67)												0.36*
13. Guilt	1.03 (0.81)												

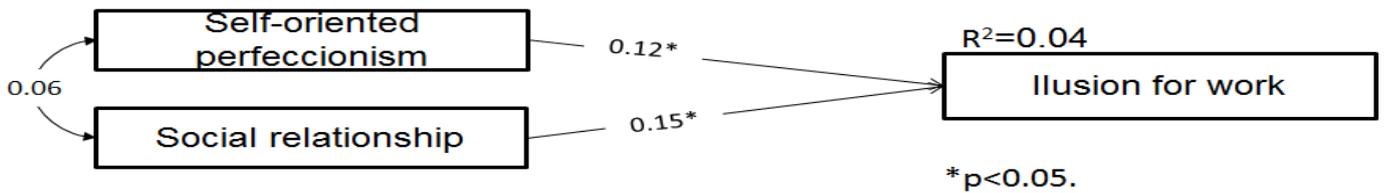


Figure 1. Illusion for work's predictive factors of basic education teachers from Juazeiro-BA.

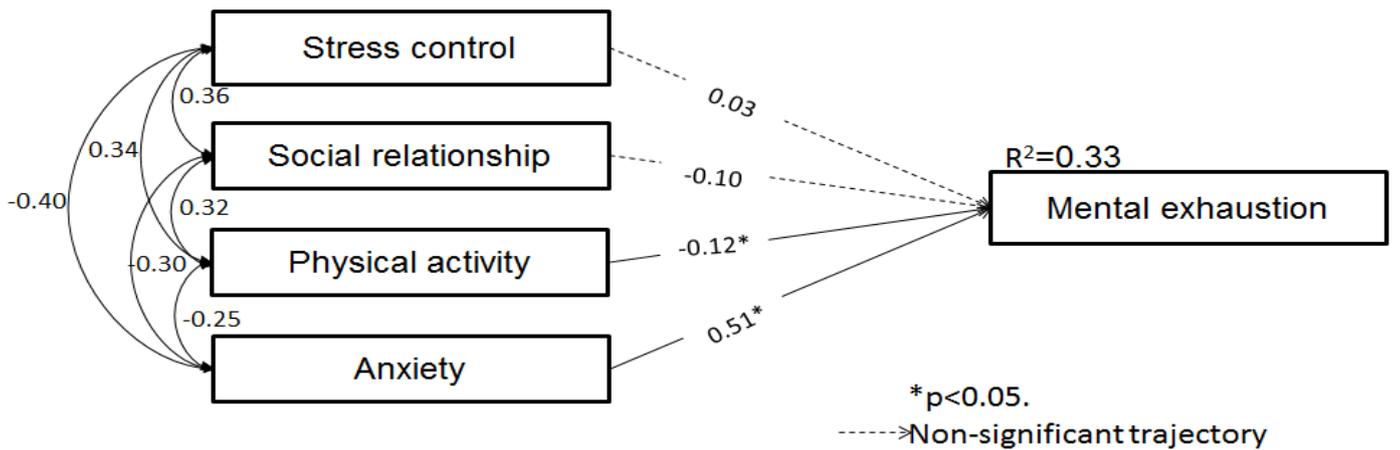


Figure 2. Mental exhaustion's predictive factors of basic education teachers from Juazeiro-BA.

feelings of indolence and guilt.

Analyzing the dimension of illusion for work and its associations (Figure 1), it was observed that both self-oriented perfectionism and lifestyle's dimension of social relationship had a positive effect on such dimension. The illusion for work represents the only positive dimension of this burnout questionnaire and it indicates that work is a source of personal and professional achievement (Gil-Monte et al., 2010). In this sense, despite the small effect ($R^2=0.04$), the results have shown that demanding and setting high standards for oneself and cultivating good social relationships as part of one's lifestyle can

bring higher work satisfaction for these teachers. Past research has already pointed out the importance of social relationships for this profession (Both, 2008; Rodríguez-Mantilla & Fernández-Díaz, 2017; Souza & Costa, 2011).

Similarly, Stoeber and Rennert (2008) have also highlighted a positive effect of perfectionist efforts, which is similar to the present dimension of self-oriented perfectionism, on the personal accomplishment (illusion for work) of German secondary school teachers ($\beta= 0.32$), with a larger effect compared to our study, suggesting a cultural difference in the impact of perfectionism on burnout. Still, in a meta-analysis of 43 studies

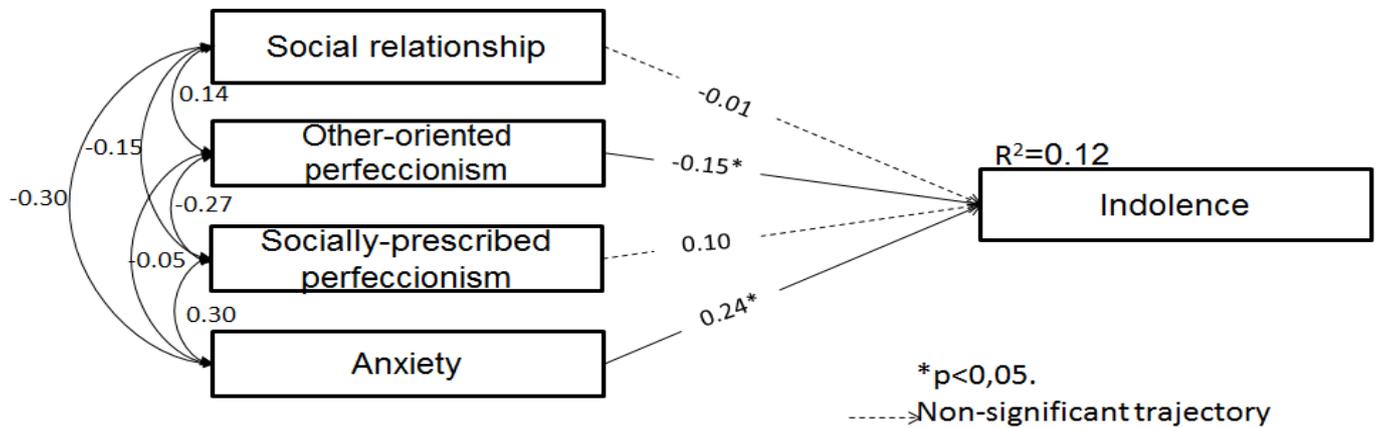


Figure 3. Factors predicting the indolence of basic education teachers from Juazeiro-BA.

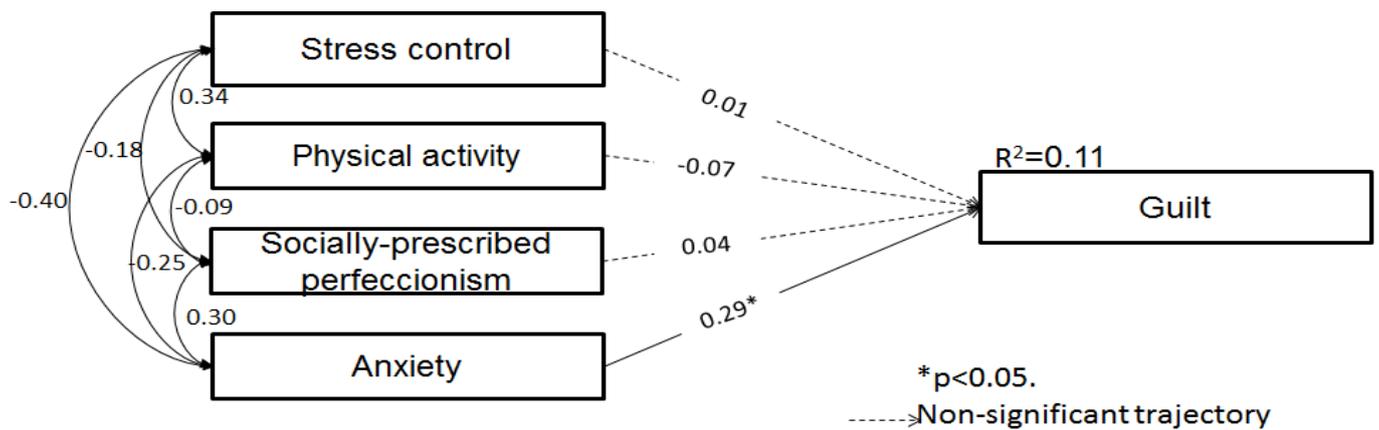


Figure 4. Factors predicting the guilt of basic education teachers from Juazeiro-BA.

in other occupational and sporting settings, this self-oriented characteristic of perfectionism, considered as adaptive, also showed a positive impact on burnout's personal accomplishment ($r = 0.16$; CI95%: 0.09, 0.24) (Hill & Curran, 2016). It is worth noting that differences in effect sizes between studies can be, in addition to cultural influences, a reflection of the different instruments used to measure each variable.

Regarding the three negative dimensions of burnout, mental exhaustion, indolence and guilt (figures 2, 3 and 4), we highlight the positive influence of anxiety on all of them. It means that the feelings of apprehension, restlessness, anguish and early suffering, characteristic of anxiety, are able to potentialize burnout in all its dimensions, especially on these subjects' mental exhaustion, which had stronger association with anxiety.

These results are similar to those of two other studies which have also assessed the relationship between anxiety and burnout in teachers. Demir (2018) found a somewhat lower effect of anxiety on an overall burnout dimension ($r = 0.31$ and $\beta = 0.11$) in a predominantly male sample (60%) of teachers in Turkey; further, in a sample of professors and researchers from the UK higher education (64% women), anxiety had positive relationships with emotional exhaustion at different times (r values between 0.25 and 0.71) (Flaxman, Ménard, Bond, & Kinman, 2012). In this sense, a meta-analysis of 34 studies, in other occupational and sports contexts, found a positive relationship between anxiety and general burnout ($r = 0.46$; C.I. 95%: 0.42, 0.50) (Koutsimani et al., 2019).

Looking at Figures 3 and 4, we observe that socially prescribed perfectionism, that is, the external social pressures for things to be done with perfection, exerted small influence with no significant trajectory on the dimensions of indolence and guilt.

Further, others-oriented perfectionism, which reflects one's high demands and expectations for the behavior and performance of others (Hewitt & Flett, 1991), had a significant and positive impact on teachers' sense of indolence. This indicates that the expectation of perfection directed towards other people, such as students, parents and school employees can increase cynicism, indifference and negative attitudes towards these individuals (Gil-Monte et al., 2010).

Unlike our results, Stoeber and Rennert (2008) found that depersonalization, a dimension from another burnout instrument that resembles the here-assessed dimension of indolence, was predicted by perfectionistic striving ($\beta = -0.28$) and negative reactions to imperfection ($\beta = 0.49$), but not by external expectations and pressures coming from parents, students and co-workers. In addition to cultural differences, the instruments adopted by these authors did not evaluate perfectionism aimed at other people, limiting our comparisons. Out of the school environment, Hill and Curran (2016) verified a negative association between depersonalization and adaptive perfectionism ($r = -0.14$; C.I. 95%: -0.07, -0.20) and positive relationship between depersonalization and maladaptive perfectionism ($r = 0.26$; C.I. 95%: 0.22, 0.30). Despite the limitations in the comparison of the present results with those from the literature, it is possible to hypothesize that social aspects of perfectionism have a different importance for the teachers and their burnout risk in the Brazilian cultural context.

Finally, and in agreement with the literature regarding exercise and physical activity practice by teachers (Ferreira et al., 2015), the increased presence of physical activity in the teachers' lifestyle had a protective effect against burnout syndrome, which can relieve the feeling of guilt and, above all, help reducing these

individuals' mental exhaustion. In fact, the benefits of physical exercise on people's mental health are already widely recognized in the literature (Ferreira et al., 2015). In this sense, adopting an active lifestyle can represent an important measure to combat the exhaustion caused by work and increase the quality of life of teachers, especially when considering the high prevalence of physical inactivity seen in this population (Both, 2008; Both et al., 2007; Ferreira et al., 2015).

Although present research reveals important information regarding the factors associated with burnout syndrome among elementary education teachers, some limitations need to be pointed out. First, participants were teachers from a single city in the state of Bahia, Brazil, which makes difficult the generalization of the results to the completely educational context, despite bringing relevant implications for professionals involved in basic education. Another important limitation relates to the cross-sectional design of our study, which does not allow for inferences of causality.

Future research seeking to broaden the understanding of the relationships between individual aspects, such as perfectionism, anxiety and lifestyle, and burnout syndrome, may benefit from the adoption of mixed (quantitative and qualitative) methods to enrich the understanding of this complex phenomenon. Further, longitudinal designs can offer important contributions for understanding the development of these phenomena throughout teachers' careers. Our results also highlight the need to better understand the influence of cultural aspects on the relationships investigated.

Conclusion

It can be concluded that perfectionism, especially self-oriented perfectionism, and the social relationships are determinant for the personal and professional achievement among elementary teacher schools. Although the practice of physical activity has showed a small contribution to the control of burnout symptoms, it is not possible to state this practice would be sufficient to modify or improve teachers' physical and psychological well-being. However, the symptoms of anxiety seem to potentialize the symptoms of guilt, indolence, and mental exhaustion. It is important to highlight that the context in which the work of public-school teachers develops can be a driver of these anxiety symptoms, which, in turn, trigger symptoms of burnout. The teacher's role encompasses tasks that go beyond the classroom and in to the extraclass environment, which can create difficulties for a person to manage his / her role as a teacher

We hope that the results from present study may encourage changes in teachers' lifestyles as a measure to reduce the emergence of burnout. Moreover, it is necessary to have information access in order to understand burnout's signs and symptoms and to facilitate the understanding, development and evolution of this syndrome. Finally, we observe the need to disseminate information about the existence of burnout syndrome and its consequences in all spheres, because the lack of information makes it difficult to identify symptoms and adopt strategies to mitigate the effects of the syndrome. For this reason, it is concluded that the changes made at the individual level of each teacher can promote benefits in the pedagogical environment of schools.

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