



## Research Article

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# Relation between Burnout Syndrome and Resilience in Higher Teaching Activity

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### **Abstract**

*The objective of this research was to analyze the relationship between burnout and resilience in teachers at a public university in the State of Ceará, Brazil. It is a case study, quantitative, descriptive and explanatory. Data were collected through questionnaires: characterization of respondents, MBI-ED scale and Human Resilience. In the canonical correlation, a low explanatory power was observed between the constructs. The modeling of structural equations indicated that the dimensions self-sufficiency, sense of life, equanimity and perseverance of resilience, presented significant results to act in the protection of some dimensions of Burnout Syndrome.*

**Keywords:** *Burnout syndrome, Resilience, Teaching, Higher education, Public university*

## **1. Introduction**

Due to changes in the world of work, especially after globalization, the profile of the work and the workers changed to adapt the technological innovations introduced in the productive processes. The construction of a new concept of work was also intensified due to the complexity and accountability associated with the tasks, reducing the number of jobs and, consequently, increasing precarious work, which implied changes in work processes and in the health- disease (Andrade & Cardoso, 2012).

These factors have led to a number of health problems, including Burnout Syndrome (BS), which

in recent decades has attracted the attention of researchers, practitioners, and the most vulnerable occupational categories throughout the world (Rísquez, Garcia & Tebar (2012). The term BS expresses gradual emotional exhaustion, associated with a certain degree of dehumanization and lack of commitment to the great demands of the work environment (Cotrim & Wagner, 2012).

In this sense, the phenomenon of "human resilience" may be a potential tool for protection against this syndrome (Tian, Liu, Zou, Li, Kong & Li, 2015). The term "resilience" was borrowed from Physics and Engineering about 30 years ago, and was adopted by Psychology to refer, initially, to the individual's ability to recover after dealing with adverse situations. Currently, the use of the term resilience has been expanded, associating it with stressful situations, flexibility, endurance and collapse (Sabbag, Bernardi Jr., Goldszmidt & Zambaldi, 2010).

In the international literature, there are some studies correlating BS constructs and human resilience, among which we can mention: Ying, Wang, Lin, & Chen (2016), with adolescents surviving the Wenchuan earthquake; Lu, Lee, Chang, Chou, Hsu, Lin & Gill (2014), with student-athletes; Hao, Hong, Xu, Zhou & Xie (2015), with civil servants; Taku (2014), with doctors; Morán & Silva (2012), with teachers from preschool to high school; Rísquez, Garcia & Tebar (2012), with nursing students; and Justo (2010), with high school teachers. In Brazil, the works developed by Rodrigues, Barbosa & Chiavone (2013), with doctors; by Lopes (2010), with firefighters; and Carvalho (2003), who carried out a documentary research with teachers about the two approaches - BS and resilience - deserve special attention.

Within the limits of the documentary review carried out in reference research bases to support this article, such as Scopus and the Web of Science, no studies were identified with higher education teachers. With the discovery of this research gap, the interest arose in investigating BS in this professional category, relating it to human resilience as a protective reality in stressful contexts and adversities. Thus, the central question that guides the research is: is there a relationship between burnout syndrome and human resilience in the universe of higher education teachers?

Thus, the general objective of the research is to analyze the relationship between burnout and resilience in teachers at a public university in the state of Ceará, Brazil.

Burnout among teachers has been addressed as a serious problem among educational institutions around the world, and to understand the consequences that this phenomenon can be crucial, since it can have repercussions on motivation, satisfaction, quality of life, health, longevity and in the service delivered to society by these professionals (Pietarinen, Pyhälä, Soini & Salmela-Aro, 2013). Consequently, for organizations, such research may represent a step forward in the adoption of strategies to reduce burnout or help mitigate its effects on individuals, avoiding withdrawal and turnover at work.

From a conceptual perspective, the approaches to burnout syndrome and human resilience are interrelated and derive from the behavioral approach to managing people. Considering that the theoretical production on the theme is still in maturation, there is room for its decanting, justifying empirical incursions as the one that led to investigate a subject that, in recent years, has gained centrality in the field of people management.

## 2. Theoretical context

### 2.1 Aspects on burnout and its influence on teachers

Occupational burnout syndrome is usually long-term stress (IVANIC, 2017). According to Silva, Dias & Teixeira (2012), burnout syndrome is one of the greatest psychosocial problems of our time and results from the exacerbation of the capitalist logic embedded in the relationship between people and the means of production. For these authors, employees have less and less leisure and well-being outside the work environment with family and friends due to the pace of work that allows a balance between life and work. As a consequence, stress increases and the individual can reach the critical level of exhaustion.

The use of the term burnout syndrome as a psychological phenomenon emerged in the United States in the 1970s to name the relationships that occurred in the work of professionals who maintained close contacts with the people who demanded their services. However, the use of this

word had already been popularized with the publication of Greene's novel, "A Case of Burn-Out", published in 1961, which tells the story of a tormented and disillusioned architect and, for this reason, abandoned his work to live in the African jungle (Maslach, 2003). Maslach & Goldberg (1998), define burnout as a kind of prolonged reaction to chronic emotional and interpersonal stressors in the workplace. For the authors, syndrome involves a stress experience resulting from the complexity of the social relationships to which individuals are subjected.

The term burnout syndrome was first associated by Freudenberg in 1974 with problems arising from social services. Borges (2005), emphasize that the association between BS and mental illness arose when Freudenberg began to notice changes in the behavior of volunteers working at a drug user rehabilitation center. However, it was Cristina Maslach who, at an annual meeting of psychology in 1977, popularized the term as definitely associated with diseases of a psychic nature.

In this context, it can be affirmed that the burnout syndrome is a multidimensional phenomenon involving several components. There is convergence of some authors in the sense of focusing on three essential dimensions (Van Droogenbroeck, Spruyt & Vanroelen, 2014; Codo & Vasques-Menezes, 2000; Maslach & Jackson, 1984):

1. **Emotional exhaustion** - circumstances in which professionals are limited in their affective levels because they perceive that emotional resources and their energies are exhausted as a result of the problems experienced in the daily life of organizations. Refers to feelings of tiredness, emotional exhaustion, and feelings of emotional overload;
2. **Depersonalization** - also called cynicism, is the tendency to arouse negative feelings and behaviors showing a hardening in the affective relationships between the employees, the service provider and the beneficiary of the service. It is revealed by indifferent and negative attitudes towards the user, translated by impersonality, dehumanization and insensitivity to the problems of others; and,
3. **Low professional achievement** - tendency to decrease performance at work, affecting capacity, service and interaction with users and the organization, due to negative evaluations and dissatisfaction with professional achievements. Refers to the drop in self-esteem, reducing the desire for professional achievement.

When it comes to teachers, Yaegashi, Alves & Lara (2008); Benevides-Pereira (2003), point out some issues that may make them more vulnerable to this pathology: little or no recognition, difficulty in keeping the student's attention, low pay, lack of autonomy, overwork and involvement with students. Those who experience high levels of illness tend to have less friendly relations with their students, are less tolerant to interruptions in class, and are more susceptible to health problems and feelings of job dissatisfaction (Fernet, Guay, Senécal, & Austin, 2012; Hakanen, Bakker & Schaufeli, 2006). The effects of BS affect not only teachers, but also affect students and the institution as a whole, directly interfering with the achievement of pedagogical objectives (Andrade & Cardoso, 2012).

Most of the individuals affected by the syndrome attempt to overcome their effects through the social and emotional support of co-workers, reorganizing the work environment or changing their teaching methodology (Shin, Noh, Jang, Park & Lee, 2013). However, it is important to emphasize that, in addition to individuals, organizations have the duty to adopt strategies that aim to minimize the impacts and impacts that the phenomenon may have on professionals.

## 2.2 Resilience

Resilience is the ability people have to cope with and overcome adverse conditions (Nirupama, Popper & Quirke, 2015), with real-life shocks, which may also involve prolonged sources of stress (Manyena & Gordon, 2015).

Psychology and the Science of Management appropriated the term "resilience", as it could denote the capacity of human beings to adapt and / or recover to situations of frequent changes and complexity in the market that brought about as a consequence the psychological suffering (Barlach, 2005).

Resilience is, therefore, the result of the interactive process between the individual and his / her environment, not being a fixed attribute, since it is a variable process and determined by the individual's response to the exposed risk (Felgueiras, Festas & Vieira, 2010).

In the organizational context, human resilience manifests itself through the adaptability and adoption of flexible behaviors in adverse situations. This ability prescribes people's ability to cope with crises and, more than that, they grow stronger when they overcome adversity, affirming their experience and learning (Bessi & Medeiros, 2014, Barlach, Limongi-França & Malvezzi, 2008; Couto, 2002).

Although many people are more vulnerable to stress than others, Zwack & Schweitzer (2013) suggest that individuals who develop mental, physical, and social resources that contribute to their well-being and promote assertive decision-making are less likely to suffer the effects of burnout. This information is supported by research which found that individuals with high levels of resilience were better prepared to deal with stressors in the work environment, thus promoting greater mental health (Nedrow, Steckler & Hardman, 2013; Garcia & Calvo, 2012).

### 3. Methodological procedures

It is a research with quantitative method (Costa, 2011), mode of investigation in the case study (Yin, 2015), and descriptive and explanatory of the ends (Vergara, 2005). The study was developed at the State University of Ceará (UECE), investigating both teachers who are part of the permanent faculty and those who fall into the category of substitutes. The choice of UECE was for convenience (Cooper & Schindler, 2016). The research universe consisted of 789 permanent teachers and 286 substitute teachers. A simple random sample of 283 teachers was obtained, of which 207 were permanent and 76 were substitutes.

The data were collected through a questionnaire composed of three modules: the characterization of the respondents, the MBI-ED scale and the Human Resilience scale. The first module gathered information about the time spent by the teachers investigated, the position (whether permanent or substitute), age group, schooling, family income, sex and marital status. In the second module, the Maslach Burnout Inventory Educators Survey (MBI-ED), validated in Brazil by the Nucleus of Studies and Research in Burnout Syndrome (NEPASB), University of Maringá, was used. The objective of MBI-ED was to evaluate the individual in his work environment, considering three dimensions: emotional exhaustion (nine items); depersonalization (five items); and low professional achievement (eight items).

The last module considered the human resilience part and used the Wagnild and Young scale in 1993, translated and adapted by Pesce, Assis, Avanci, Santos, Malaquias & Carvalhaes (2005), and validated in Brazil by Bacchi & Pinheiro (2011). The Resilience Scale (RE) is composed of 25 items, distributed in the factors Self-sufficiency, Sense of Life, Equanimity, Perseverance and Existential Singularity (Perim, Dias, Corte-Real, Andrade & Fonseca, 2015). Both the second and the third module, the evaluation scales are ten-point Likert type (Costa, 2011), and at the end of them a question was included to synthesize the evaluation of the respondents about the constructs worked.

The data collection was done through the availability of the questionnaire on the university website, and the collection by institutional e-mail of each teacher.

As the objective of the research was not to predict events, but only to explain them, the statistical treatment adopted sought to identify the influence of the independent variables on the dependent variables. The assumptions used to guide the research were: H1 - self-sufficiency reduces levels of (a) emotional exhaustion, (b) poor professional performance and (c) depersonalization; H2 - the sense of life reduces the levels of (a) emotional exhaustion, (b) low professional income and (c) depersonalization; H3 - equanimity reduces levels of (a) emotional exhaustion, (b) poor professional performance and (c) depersonalization; H4 - perseverance reduces levels of (a) emotional exhaustion, (b) poor professional performance and (c) depersonalization; and H5 - existential singularity reduces levels of (a) emotional exhaustion, (b) low professional achievement, and (c) depersonalization.

The SPSS software - Statistical Package for Social Sciences in version 20.0 and the software AMOS 18.0 - were used for data processing. Descriptive statistics were used to determine the frequency of responses to the questions asked - demographics and respondents' perceptions.

The research complies with the Helsinki Declaration on the ethical principles governing human research.

## 4. Results and Discussions

### 4.1 Demographic characteristics of the sample

It was found that the sample is mostly male (54.9%), married or in a stable relationship (65%), and a large part (64.7%) work in the campus located in the Itaperi neighborhood, in Fortaleza-CE, Brazil, considered as the main campus of the UECE. The others are distributed in other localities of the city and in other municipalities of the interior of the state of Ceará. Regarding the age group, the majority of respondents are in the 25-45 age group (54.3%), followed by those aged 46-60 (37.5%), which may explain the percentage of married or in a stable relationship individuals. This distribution of teachers with more advanced age groups may be associated with the fact that the university faced a prolonged period without public tender.

Regarding the length of service in the institution, the highest concentration of respondents is in the range of teachers with more than 10 and less than 20 years of service (27.1%) and with more than 1 and less than 5 years of service (26.8%). It is also noted that about 80% of the teachers who answered the survey have less than 20 years of work in the job, and that only 3.5% already have conditions for a retirement. Most of the respondents are made up of constant professors (70.9%), that is, those who entered the University through an approval in a public tender, hired without a fixed term. The remaining (29.1%) are substitute teachers, also approved in public selection, but hired for the temporary replacement of deficiencies due to exemptions, retirements, deceases, licenses, among others.

Regarding the level of schooling, the majority of the sample has a doctorate degree (40.1%), of which 16.7% also completed postdoctoral studies. Next, the masters (39.4%) appear, who, together with the doctors, make up the predominant category among the professors of the university. As for monthly family income, 12.3% were in the range of up to 5 minimum wages; 34.4% receive from 6 to 10 minimum wages, representing the majority of respondents; 30.3% reported being in the range of 11 to 15 minimum wages and about 23% have family income that exceeds 15 minimum wages.

### 4.2 Human resilience levels and bs of respondents

Based on the analysis of respondents' records, it was found that 49% of them presented high levels of resilience, followed by those with moderate levels (32%). Therefore, 81% of the teachers who responded to the research are likely to adopt adaptive and resilient abilities, coping and overcoming obstacles arising from adverse situations in the workplace, as presented in the literature (Bessi & Medeiros, 2014; Barlach *et al.*, 2008; Couto, 2002). This result can be considered of great value to the organization they serve, because according to Zwack & Schweitzer (2013) these individuals tend to develop mental, physical and social resources that will help them overcome diversity in a successful way.

Regarding BS, the results revealed that only 6% of the respondents presented a high tendency to develop BS, while 53% showed to be resistant to the phenomenon. It can be inferred, at the outset, that this result is probably due to or is associated with the high degree of human resilience presented by the UECE teachers.

### 4.3 Modeling in structural equations

The Modeling in Structural Equations (MEE) was used for the analysis and estimation of the proposed model. For Hair, Babin, Money & Samouel (2005), the MEE is a multivariate technique that combines aspects of multiple linear regression and aspects of factorial analysis, with the objective of simultaneously estimating dependent and interrelated relationships, that is, they are used to try to describe a possible cause-effect relationship. The author considers that 200 cases are sufficient to carry out the MEE.

According to Silva (2015), the benefits of the MEE consist in its potential to specify the models on which the relationships between the constructs and the variables that compose it are based, as

well as their adequacy for the analysis of the direct and indirect relationships between the constructs without bias sample. This way, the statistical assumptions of the MEE are more stringent than those used in traditional methods.

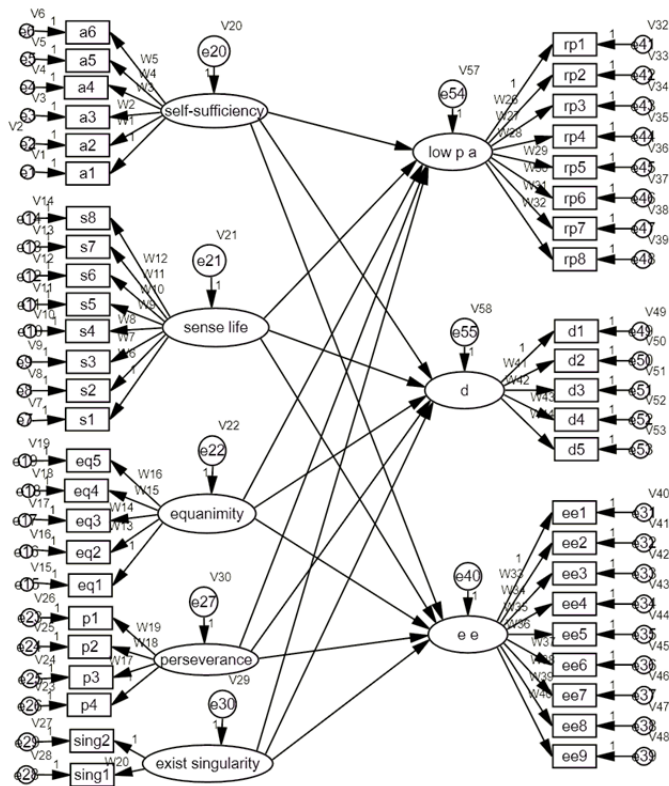
The model was estimated with all the dimensions described in the previous topics and the data was processed in AMOS 18.0 software.

The advantage of confirmatory modeling is that the structural equation models do not lead to the loss of sample information that occurs in the approach that uses exploratory factor analysis scores. For this reason, it was decided to evaluate the phenomena resilience x burnout syndrome through the modeling of structural equations.

Structural equation models were estimated to study possible relationships between the constructs that make up the resilience scales and burnout syndrome. The general expectation is that resilience acts in a way that alleviates the perception of the effects of the occurrence of a possible burnout syndrome in education professionals. For this, two related models were formulated, which are counterposed in their hypotheses.

The notation used in the diagrams for the constructs of the burnout scale were: ee - emotional exhaustion; d - depersonalization; and rp - low professional achievement. For the resilience scale, the constructs used the following notation: self-sufficiency; s - sense of life; eq - equanimity; per - perseverance; and sing - existential singularity. The models are presented as a diagram below.

The model considers the component constructs of the burnout scale as endogenous (or dependent variables) and those of the resilience scale as exogenous (as predictors), as shown in Figure 1.



**Figure. 1:** Relation between the constructs of Resilience and Burnout Syndrome for the UECE teachers 2016.

**Source:** Prepared by the authors (2017).



In addition, as a result of the modeling in structural equations, it is possible to infer about the sign, magnitude and significance of the relationships between the constructs of the resilience and burnout scales.

In this model, the contributions of the resilience scale constructs as predictors of burnout syndrome were evaluated. In the model, some parameter estimates were considered significant at the 0.05 level and others were considered non-significant, as it will be discussed below.

Considering the relationship between the constructs of the scales, it was observed that the construct self-sufficiency as a predictor of BS presented a significant relation to the low professional achievement and emotional exhaustion, being, however, considered non-significant to predict depersonalization, so that this may be tested in another sample. Self-sufficiency acted in a way to increase the low professional achievement, since it presented a relation with positive sign, and had a negative sign with emotional exhaustion, indicating that the greater the emotional exhaustion, the less self-sufficiency. The feeling of self-sufficiency, that is, a state of not needing help, support or interaction from others, may contribute to the tendency towards the development of low professional achievement, and it can be inferred that high degrees of autonomy do not contribute positively to the professional achievement.

Regarding the sense of life construct of the resilience scale, it was observed that its performance as a predictor of burnout syndrome presented significance for emotional exhaustion and depersonalization with negative sign, indicating that the construct sense of life acts in a way to reduce emotional exhaustion and depersonalization. Regarding the low professional achievement, despite the positive relationship, it had a small magnitude and it was considered not significant for this sample and therefore, it could be tested in another sample. The research findings are in agreement with the literature, since an individual who has a sense of life, that is, that has a purpose and meaning regarding its human existence, will tend to have lower levels of exhaustion and depersonalization, considering their levels of existential satisfaction.

Regarding the construct equanimity of the resilience scale, it was observed that its performance as a predictor of the burnout syndrome was considered not significant for depersonalization and emotional exhaustion, being significant only to predict the low professional achievement with positive signal, that is, increasing it. This decreasing relation between equanimity and low professional achievement was not expected according to the hypotheses of the research, since if considering equanimity means an equality of temperament, mood, and tranquility of spirit, individuals with such feeling should have a negative tendency for the development of low professional achievement.

The estimates of the parameters that evaluate the performance of the existential singularity as a predictor of the constructs of the burnout scale were considered not significant at the significance level of 5% and should therefore be tested in another sample or have some of the items of the existential singularity adapted to compose the perseverance construct, according to the resilience model used in the research.

Finally, the perseverance construct presented significance only to predict the low professional achievement with a positive sign, indicating that the higher the level of perseverance, the higher the rate of low professional achievement. Regarding this aspect, again the research findings are contrary to the literature on the subject, considering that persevering individuals are those with firmness, consistency and tenacity, low levels of professional achievement should reduce.

## 5. Conclusion

Initially it is important to emphasize that the results can not be generalized, since the study focuses on distinct campuses of only one higher education institution in Ceará. Regarding this, this study aimed to analyze the relationship between burnout and resilience in teachers of a public university in the State of Ceará. The results showed a weak relationship between the constructs, since the regressions between the dimensions of these scales presented low power of explanation, and it is not recommended to use the dimensions of one scale as predictors of the dimensions of another. However, from the results of the modeling in structural equation, it was verified that some dimensions presented correlations, which brings significant contributions to the study.

The interpretation of the results was made based on the hypotheses and objectives pre-

established in the study. With regard to the hypotheses, the results were as follows:

Regarding hypothesis 1, self-sufficiency acted to reduce emotional exhaustion and increase low professional achievement, indicating that professionals who believe and trust in their own personal strengths and potential do not see these aspects as a way to guarantee them a high achievement, however, the levels of exhaustion tend to decrease. Regarding the depersonalization dimension, the results were not significant. Thus, the hypothesis was not rejected in relation to item "a", but it was denied in relation to items "b" and "c".

Regarding hypothesis 2 - the evidences showed that the sense of life dimension acted in order to reduce the levels of emotional exhaustion and depersonalization. That is, those individuals who realized that their life has a meaning, a purpose and believe there is a good reason to live (Perim *et al.*, 2015) tend to materialize these feelings through a more humanized attitude in what it refers to their interpersonal relationships in the work environment, be it with their colleagues, superiors, subordinates and students, but are also more likely to resist emotional wear and tear from such contacts. Regarding the low professional achievement dimension, the research did not present significant results. Therefore, the hypothesis was confirmed with respect to items "a" and "c" and refuted with regard to item "b".

Regarding hypothesis 3, the results pointed out that the equanimity dimension increases the levels of low professional achievement, that is, the more the individual sees adverse circumstances in a flexible and moderate manner, the greater the chances of him having low professional achievement. Regarding this, Nedrow *et al.* (2013); Garcia & Calvo (2012), argue that the institution needs to be attentive to the teaching public, promoting actions that can resolve the effects of BS, through the development of mental, physical and social resources that contribute to their well-being in order to generate a high professional achievement (Zwack & Schweitzer, 2013). With respect to the other dimensions, these did not reveal significant results, which allows to conclude that the hypothesis was denied in all its items.

For hypothesis 4, the evidence has revealed that perseverance overcomes levels of low professional achievement, allowing one to suppose that individuals struggling daily not to allow demotivation and adversity to keep them from moving forward in the organization is not enough to generate high professional achievement in their role. In this sense, the great attention that the institution researched needs to give to the employees stands out. This organizational support can be of great importance to rescue the commitment of their teachers and make them perceive and achieve a high involvement with the institution and achieve a high professional achievement (Teixeira & Santana, 2015). The other dimensions did not present significant values. Therefore, hypothesis 4 was refuted.

Finally, hypothesis 5 showed that all analyzes were considered non-significant and should therefore be tested in another sample or have some of the items of existential singularity adapted. In this way, H5 can also be rejected in what refers to all items.

A confirmatory approach was used based on the modeling of structural equations, in which, it is evaluated if the proposed model is feasible for the sample variance-covariance matrix.

As limitations of the research, it is highlighted the impossibility of generalizing the results obtained for other high education institutions, taking into consideration that the data collected was from a single higher education institution, of public nature, located in the State of Ceará, Brazil. The results of this study constitute a relevant data base that can subsidize the replication of similar investigations in other institutions and localities, to compose a mosaic in which the perceptions of the teachers about the worked constructs are glimpsed, in order to analyze how the relationship between burnout and resilience in these organizations happens.

It is understood that the present research, due to the originality and methodological rigor used to analyze the relationship between burnout syndrome and human resilience in university teachers, contributed to the generation of cumulative knowledge about the subject matter, while providing subsidies for that new researches can be carried out in other organizations on the subject, as well as provide the managers of the research institution with a reflection on the adoption of measures that will contribute to increase the resilience of their teachers and reduce, through this, the impacts that the burnout and other adversities may arise in the organizational environment. In this sense, it is considered that the objective of the study was met.



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