

# Psychometric Properties of the 8-item Perception of Organizational Rumors Scale (PORS) in a Puerto Rican Sample<sup>4</sup>

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## Abstract

The study aimed to assess the psychometric properties of the 8-item Perception of Organizational Rumor Scale (PORS) by Velez-Vega (2019). It contains two dimensions, and the scale was administrated in a Puerto Rican sample. A confirmatory factor analysis (CFA) tested the construct validity using AMOS version 24 software. The sample was 150 working adults, and 65% were females. The PORS scale has been preliminarily validated using content validity, an Exploratory Factor Analysis, and a convergent/divergent analysis but never underwent a CFA. The results show that the final scale ended with seven items and comply with a model fit in Model 2 (M2) and had good indices CFI, TLI, NFI, RMSEA, AIC, and Chi-square p-value. The 7-item PORS scale has a Cronbach's alpha of .86 and the convergent analysis of the two dimensions show a significant result. The scale measures the construct validity and is a valid instrument for the Puerto Rican population.

## Keywords

Confirmatory Factor Analysis, rumors, psychometric, Likert scale.

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# Propiedades psicométricas de la Escala de Percepción del Rumor Organizacional (PORS) de 8 ítems en una muestra puertorriqueña

## Resumen

El estudio tuvo como objetivo evaluar las propiedades psicométricas de la Escala de Percepción del Rumor Organizacional (PORS) de 8 ítems de Vélez-Vega (2019). Contiene dos dimensiones y la escala fue administrada en una muestra puertorriqueña. Un análisis factorial confirmatorio (AFC) probó la validez de constructo utilizando el software AMOS versión 24. La muestra estuvo compuesta por 150 trabajadores adultos, de los cuales el 65% eran mujeres. La escala PORS ha sido validada preliminarmente usando validez de contenido, un análisis factorial exploratorio y un análisis convergente / divergente, pero nunca se sometió a un AFC. Los resultados muestran que la escala final terminó con siete ítems, cumplió con un ajuste de modelo en el Modelo 2 (M2) y tuvo buenos índices CFI, TLI, NFI, RMSEA, AIC y Chi-cuadrado p-value. La escala PORS de 7 ítems tiene un alfa de Cronbach de .86 y el análisis convergente de las dos dimensiones muestra un resultado significativo. La escala mide la validez de constructo y es un instrumento válido para la población puertorriqueña.

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### Palabras clave

Análisis factorial confirmatorio, rumores, psicométrica, escala de Likert.

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# Propriedades psicométricas da escala de percepção de rumores organizacionais de oito itens (PORS) em uma amostra porto-riquenha

## Resumo

O estudo teve como objetivo avaliar as propriedades psicométricas da Escala de Percepção de Rumores Organizacionais (PORS) de Velez-Vega (2019). Ele contém duas dimensões e a escala foi administrada em uma amostra porto-riquenha. Uma análise fatorial confirmatória (CFA) testou a validade de construto usando o software AMOS versão 24. A amostra foi de 150 adultos trabalhadores, e 65% eram mulheres. A escala PORS foi preliminarmente validada usando validade de conteúdo, uma Análise Fatorial Exploratória e uma análise convergente / divergente, mas nunca foi submetida a um CFA. Os resultados mostram que a escala final terminou com sete itens e está de acordo com um modelo de ajuste no Modelo 2 (M2) e teve bons índices CFI, TLI, NFI, RMSEA, AIC e valor de p Qui-quadrado. A escala PORS de 7 itens tem um alfa de Cronbach de 0,86 e a análise convergente das duas dimensões mostra um resultado significativo. A escala mede a validade de construto e é um instrumento válido para a população de Porto Rico.

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### Palavras chave

Análise Fatorial Confirmatória, rumores, psicométrica, escala Likert.

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## Introduction

Rumors in the workplace are an omnipresent phenomenon in today's organizations. In time, rumors will form part of organizational life. Rumors associated with organizational change may also predict where the organization is heading, such as downsizing (Rivero, 2013). The proliferation of rumors is a widespread phenomenon in the real world. The use of the Internet has become a source of information for people, but word of mouth is also another means for rumors to travel quickly. Now, with technological advances, especially social networking, has become a new mode of communication and the propagation of rumor transmission. Rumors can hurt people, and it can be a form of mechanism to cause harm and destruction, and it can produce social panic and social stability (Zhang & Li, 2019).

Base on the literature review, one of the factors that trigger organizational rumors in the workplace is because of the nonexistence flow of information among supervisors and managers with their subordinates. When supervisors and managers impede the formal communication channels, it usually generates uncertainty in employees, causing concerns, fear, and anxiety. Also, when employees show a great interest in a rumor, especially on organizational changes within the workplace, employees will express disbelief regarding the organization's hidden motives and self-interest (Dağlı & Han, 2018; DiFonzo & Bordia, 2013). Robbins and Judge (2018) state that informal communications or grapevine will always draw attention and incite a topic of interest in the

employee's conversations in the workplace. At times, it produces some anxiety in them, mainly when the information is ambiguous and is out of control.

Aeen, Zarei, and Matin (2014) carried out a study in Iran, and one of the goals of the research was to explore if there was a relationship on organizational silence, organizational rumors, and organizational commitment. The authors concluded that when rumors are out of control, it had a reversed significant relationship between organizational commitment and organizational silence. Moreover, there was a significant relationship in rumors with organizational silence, which employees acted in silence would strengthen the silent atmosphere, and the organizational rumors increase and vice versa.

Velez-Vega (2017) conducted a study in Puerto Rico of 150 participants, of which 65% were females, and 59% were from the private sector. The results showed a significant difference in rumors between Baby Boomers and Millennials, and a significant relationship in rumors and engagement and no significant difference in rumors by sex and sector.

Bordia et al. (2014) completed a study in Australia on organizational rumors with employees who used rumors as revenge in the place of work. The authors concluded that rumors might occur when employees use rumors as a form of revenge inside the organization due to unfavorable treatment, usually a form of psychological contract breach. Revenge played a significant role in employees, which resulted in high in the normative belief category versus the unfavorable treatment category, and many of them believe that it should be reciprocal.

Erden (2013) presented a study in Turkey. Erden argues when supervisors and managers have the authority that they may create power distance relationships among employees. Their status of power represents inside the organization may escalate the perceptions of uncertainty in employees. Eventually, the corporate grapevine of an organization becomes out of control. Also, Erden believes that there is a relationship between power distance and corporate grapevine. It may generate levels of uncertainty when supervisors and managers do not share valuable information with their subordinates and other co-workers. However, when supervisors and managers share essential information with their employees that there should be a decreased level of uncertainty in employees. Nonetheless, informal communication is inevitable. It will always be part of the organization setting and turn into the most common communication channel workers may rely on as a primary source of information.

In sum, it is essential to have valid and reliable instruments to measure this type of behavior in organizations. Having valid instruments are essential in the advances of research and develop new theoretical grounds. The 8-item Perception Organizational Rumor Scale should be tested, and its psychometric properties can be applied in future research, primarily focusing on organizational rumors.

It is necessary to update the psychometric properties with advanced statistical analysis. As a result, this study pretends to answer the following questions: What are the psychometric properties of the 8-item Perception Organizational Rumor Scale with a confirmatory factor analysis? Will the scale have the same two-factor

solution? Can the 8-item Perception Organizational Rumor Scale have a shorter version?

To answers these questions, this study proposes to analyze the factorial structure of the scale. It may allow the instrument to have better psychometric properties and may contribute to new studies on organizational rumors but focusing on the organizational behavior in Puerto Rico. In Puerto Rico, there are no valid instruments that measure rumors in the workplace, and the study aims to validate an instrument for the Puerto Rican population and continues to develop new studies and update the literature review on the phenomenon of organizational rumors.

## Definition of Rumors

DiFonzo and Bordia (2013) argue that there were attempts to well-defined rumors. They point out that Allport and Postman's classical definition of what they believe that rumors are passed along from person to person, usually by word of mouth. Kimmel (2012) defines rumors as public communication embellished by allegations or attributions. Rumors are false evidence that reflects people's assumptions about how the world works.

Clegg and Van Iterson (2009) express that rumor is characterized by the desires and the interpretation of ambiguous or threatening situations. DiFonzo and Bordia (2013) say that rumors are unverified and relevant information in people. It arises in contexts of ambiguity, danger, or when people believe there is a potential threat coming towards them. Its function is to help people sense-making and manage risk.

DiFonzo and Bordia (2013) believe that rumors are an enduring force of social and organizational landscapes that attract attention, hysteria, evoke emotions in people. It makes people come together; it affects the individual's behavior. Furthermore, rumors are not only a social psychology topic. It became an interest in other fields in the social sciences and the organizational phenomenon that includes social cognition, attitude formation, prejudices, group dynamics, intergroup relations, social influence, organizational trust, and communication.

may find a rumor to be irrelevant but still may spread the story behind the rumor to others and may also add other details in a rumor. The person may assimilate a rumor accordingly to his or her linguistic and critical thinking capacity and may not remember all the details about a rumor. However, the person feels that he or she must inform others. Lastly, Buckner's rumor theory mentions there are multiple interactions and replications of rumors circulating within the same group of people and may recirculate within the same group (Buckner, 1965; DiFonzo & Bordia, 2013).

## Rumor Theory

A well-known classical rumor theory by Buckner (1965) mentions that people must have a critical set when it comes to a rumor. It means that the person can use critical thinking and maybe skeptical and can distinguish between a true rumor from a false rumor. The person will use critical thinking and inform others about a rumor and its veracity. Another aspect of rumors is the uncritical ability or uncritical set, which means the person does not have the capacity or ability to verify a rumor. There are times, the person is psychologically-emotionally under stress and may not think clearly. However, the person may spread a rumor without checking its veracity and accept it to be accurate, especially if there are few bits of information available to the general public; for example, from official government entities or the local news. Also, the person may speculate and interchange information with others. A rumor will travel faster and may have exaggerated and false details; as a result, a new rumor will proliferate and have a snowball effect. The third aspect is the transmission set, which means the person

## Perception of Organizational Rumor Scale (PORS)

The PORS scale by Velez-Vega (2019) developed the scale using content validity with twelve subject matter experts, and the sample consisted of 150 working adults in Puerto Rico. The scale is a 7-point Likert scale ranging from 1= "hardly ever" to 7 = "almost always" and contained eight items and has a two-factor solution. The scale has an overall Cronbach's alpha of (.87). It consists of two dimensions, the Existence of Rumors, and has a Cronbach's alpha of (.90). The second is the Veracity of Rumors and has a Cronbach's alpha of (.87).

The scale underwent an Exploratory Factor Analysis (EFA), and the Kaiser-Meyer-Olkin (KMO) supports the adequacy sampling of  $KMO = .82$ , exceeding the recommended value of .60 (Kaiser, 1970). The Bartlett's Test of Sphericity (Bartlett, 1954) showed a significant of  $\chi^2 (28) = 783.146$ ,  $p < .001$ . The Principal Axis Factoring with Kaiser revealed the presence of two-component with eigenvalues

exceeding 1, explaining the first component a 54.10% and the second component a 20.88% of the variance respectively. Using Catell (1966) scree test for factor solution, the scree plot revealed two-component, and retain a two-component solution, which explained a total of 67.10% of the variance. A direct rotation oblimin was performed. The rotated solution revealed each component with high factor loadings. Afterward, to further test the construct validity, the 9-item Spanish version of the Office Gossip Scale of Schmidt (2010) with the PORS instrument was analyzed to assess the convergent analysis. The results show a significant convergent ( $r = .436$ ,  $n = 150$ ,  $p < .005$ ). Next, the 9-item, Utrecht Work Engagement Scale short version by Schaufeli et al. (2006) to assess the divergent analysis, which shows a significant result ( $r = -.168$ ,  $n = 150$ ,  $p < .05$ ) with the PORS scale (Velez-Vega, 2019).

## The aim of this Study

This study aims to access the psychometric properties of the Perception of Organizational Rumor Scale (PORS) by Velez-Vega (2019) and further test the construct validity. Aiken and Groth-Marnart (2005) state that construct validity is fundamental when it comes to validating a new instrument, scale, or psychometric instrument. The researcher must make sure the instrument measure what supposed to measure. Furthermore, it is essential to further test the new instrument with other types of statistical analysis in new studies to improve reliability and validity that may provide consistent results. Applying a Confirmatory Factor Analysis (CFA) is a type of robust statistics that may improve the PORS scale reliability and validity after any

adjustments and test the construct validity. Further, examine other psychometric properties using the Cronbach's alpha formula for reliability, and the average variance extracted (AVE) for the convergent and discriminant analysis. The composite reliability (CR) is an indicator of the shared variance among the observed variables used as an indicator of a latent construct (Fornell & Larcker, 1981).

## Methodology

This study applied a quantitative approach with psychometric instrumental type design, and non-probabilistic and snowball sampling (Creswell, 2014). Snowball sampling was used; many of the organizations declined to participate in this study. One of the alternatives was to collect the data using this technique. Goodman (1961) says that snowball sampling as a random sample of individuals drawn from a given finite population to infer statistical inferences about various aspects of the relationships of the population. It serves to identify potential participants base on referral or word of mouth.

## Sample

The criteria of inclusion in the selection of the participants to participate in this study that they currently worked at least part-time either in public or private sectors in Puerto Rico. Also, they were 21 years old and older and of both sexes.

The criteria for exclusion were participants under 21 years old and unemployed. The sample of this study consisted of 150 participants, and 65% ( $n = 97$ ) were females, and the mean age of the participants was 36.55, and the age range was from 21 to 65 years old. A 48% ( $n = 72$ ) participants were single and a 29% ( $n = 44$ ) has a Bachelor's degree. A 71% ( $n = 107$ ) live in the Southern region; a 59% ( $n = 88$ ) worked in the private and 41% in the public sector ( $n = 62$ ). In tenure, the majority 45% ( $n = 67$ ) worked 1 to 5 years in the organization. A 79% ( $n = 119$ ) held a non-management position.

## Instruments

Two instruments were distributed to the participants as well as collected data and then statistically computed for analysis. The participants received the first instrument, the Sociodemographic Questionnaire. It collected the following datum: sex, age, generations, sector, education, workplace location, civil status, job tenure, and job position.

The second instrument was the 8-item Perception of Organizational Rumor Scale (PORS) by Velez-Vega (2019) was used to measure organizational rumors a 7-point Likert scale ranging from 1= "*hardly ever*" to and 7 = "*almost always*." It consists of two dimensions, which is the Existence of Rumors, that is the fact of the existence or the presence of rumors, and possesses a Cronbach's alpha of .90. The second is the Veracity of Rumors that is the conformity to the facts, accuracy, and verification of rumors and has a Cronbach's alpha of .87. The scale has an overall Cronbach's alpha of between .87 and .88.

## Procedure

First, to comply with the aim of this research and the Pontifical Catholic University of Puerto Rico and Institutional Review Board (IRB). It requires a researcher to request permission before conducting research. The protocol CEG-25-2014 granted by the IRB. The participants and the author of the instrument must sign a consent form before participating in this study as required by the IRB committee.

Then, a consent form was handed out to the participants and informed about the purpose of the study, their rights to volunteer and withdrawal from the study, confidentiality, and when the results are available. The participants voluntarily participated and used word of mouth in this study. Another method used to collect the data was the snowball method, also known as snowball sampling. A snowball sampling was used because the researcher confronted difficulty obtaining permission from some of the organizations and declined to participate.

## Statistical Analysis

Using the Statistical Package for the Social Sciences (SPSS) version 24 for Windows to perform the descriptive statistics, the reliability of the scale using Cronbach's Alpha formula, and check any outliers. A Confirmatory Factor Analysis (CFA) was applied to measure the construct using the AMOS version 24 software. A CFA is a statistical analysis to determine if the factor structure conducted in the Exploratory Factor Analysis can be confirmed (Brown, 2015). A CFA with a structural equation modeling (SEM) and a maximum likelihood estimation perform for the validation

and data analysis. Also, the Chi-square is to determine the model fit. However, Chi-square is sensitive to sample size and tests whether a model fits in the population. The CFI (Comparative Fit Index), the TLI (Tucker-Lewis Index) are used to evaluate the fit of a model restricted nested baseline model. The NFI (Normed Fit Index) is an incremental measure of goodness of fit for a statistical model. The Root Mean Square Error Approximation (RMSEA) tests the extent that a model reasonably fits well in the population (Byrne, 2016). According to various authors, the criteria  $CFI \geq .90$  is acceptable, but a  $CFI \geq .95$  is considered a good value. The  $TLI \geq .90$  is an acceptable value, but a  $TLI \geq .95$  is a good value. The  $NFI \geq .90$  and  $RMSEA \leq .08$  is acceptable, but an  $RMSEA \leq .05$  is considered excellent. The AIC index is for model comparison, and the smaller the number, the better, and it test if the parameters estimated from the original model to cross-validate in future samples (Brown,

2015; Byrne, 2016). A Pearson coefficient is also to test the construct validity performing a convergent analysis. The Average Variance Extracted (AVE) and the Composite Reliability (CR) is to performed and examine further validity concerns factor loadings on each construct of the scale.

## Results

First, it is essential to check any outliers and normality violations of the PORS instrument. The following table 1 illustrates the skew and kurtosis. The values of asymmetry and kurtosis did not exceed the critical limits of  $\pm 2.0$  (Hair et al., 2014), and there were no violations of the norms.

Table 1  
*Descriptive Statistics and Items Distributions for the PORS Scale Items*

Item	Mean	Standard Deviation	Skew	Kurtosis
R6	3.49	1.96	.31	-1.07
R7	2.85	1.83	.67	-.66
R8	2.98	1.85	.69	-.55
R22	3.51	2.10	.40	-1.18
R9	2.79	1.90	1.02	-.17
R10	2.99	2.06	.71	-.83
R11	3.15	2.11	.48	-1.14
R12	3.03	1.98	.71	-.64

Note: R6 to R22 belongs to the Existence subscale; R9 to R12 belongs to the Veracity subscale

In the evaluation as a whole first model of the PORS instrument (M1) and regarding this type of validity show a  $\chi^2 (19) = 84.710$ ,  $p < .001$  and the indices  $CFI = .91$ ,  $TLI = .84$ ,  $NFI = .89$ ,  $RMSEA =$

.15 and  $AIC = 134.710$  were analyzed to assess the adjustment of the model of 8 items. Since it can be observed in the fit, especially indices did not comply with the norms and were below acceptable



values. Results concerning the univariate revealed no violations of skewness and kurtosis and outliers by AMOS nor SPSS.

After adjustment of the first model (M1), it was determined to remove item 22 from the scale to improve the model fitness and seek a better adjustment. Item 10 and 22 had the lowest factor loading, and after examination items 10 and 22, item 22 was problematic and improved the model fit. Removing item 22 with

factor loading less than or equal to .65 was set as a critical value (Brown, 2015). The results show that in the second model (M2) and see figure 1; it indicates a  $\chi^2(13) = 24.941, p < .05$  and the indices CFI = .98, TLI = .96, NFI = .96, and RMSEA = .08 were analyzed to assess the adjustment of the whole model of 7 items. It shows there is a better model fit, and the indices improve, and the AIC = 68.941 value decreased compared to the first model (M1).

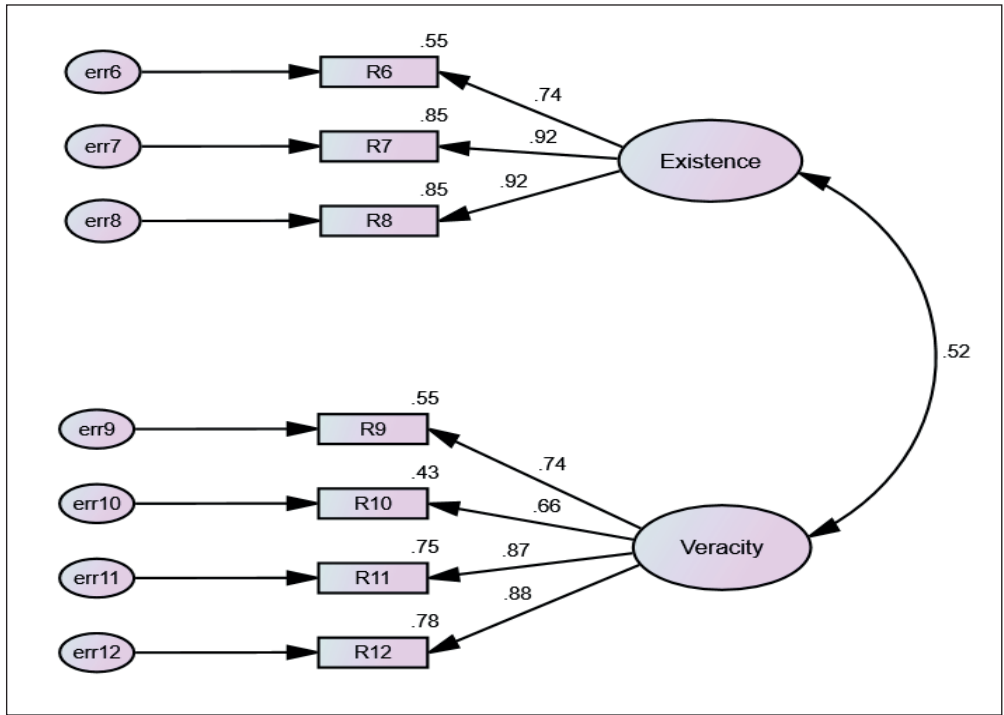


Figure 1. Model 2 (M2) of two factors of the Perception of Organizational Rumor Scale.

The 7-item PORS instrument indicated a Cronbach’s alpha of .86 and a Mean of 21.29 and a Standard deviation of (10.18). The Existence dimension with three items has a Cronbach’s alpha of .89, and the Veracity dimension has four items and has a Cronbach’s alpha of (.87). Which illustrates the scale possesses a

good alpha, and according to the literature review, a Cronbach’s alpha of .70 or above is an acceptable value (DeVellis, 2016). The following table 2 shows the corrected item-total correlation, mean, and the scale variance of each item of the PORS instrument.

*Table 2*  
*Corrected Item-Total Correlation of PORS*

PORS Scale with Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
R6	17.80	81.25	.53	.86
R7	18.45	78.43	.67	.84
R8	18.31	78.45	.66	.84
R9	18.50	78.77	.63	.84
R10	18.30	79.83	.53	.86
R11	18.14	75.00	.66	.84
R12	18.26	73.71	.77	.83

A Pearson correlation coefficient is to assess the convergent analysis of each dimension of the PORS instrument, the Existence dimension with the Veracity dimension. The results show a significant ( $r = .441$ ,  $n = 150$ ,  $p < .005$ ), meaning each subscale measure similar construct and the entire PORS instrument has reliable construct validity. Besides, the Average Variance Extracted (AVE) was measured to test further the convergent validity, and values of more than .50 indicate a construct validity. Also, to determine the discriminant validity, the AVE's values were compared with the shared variance on each construct. The AVE's must indicate a higher value than the inter construct squared correlation. The composite reliability (CR) measures the internal consistency of scale items. The result shows that AVE value in the Existence dimension had a significant of .75 and the CR value of (0.90). The Veracity dimension had an AVE value of .63 and the CR a value of .87. The inter squared correlations had a value of .27 between the factors Existence and Veracity, and comparing the AVE values indicate convergent and discriminant validity.

## Discussion

This study aimed to test further the psychometric properties of the PORS scale in the Puerto Rican sample. The results show that the scale complied with the model fit in Model 2 (M2). After the scale adjusted since the first model (M1) did not comply with all the critical values established by many authors concerning the indices. The first model (M1) contained the original 8-item PORS scale, which had a Cronbach's alpha between .87 and .88. The second model (M2) was the 7-item PORS scale still show a strong Cronbach's alpha of .86. It indicates that the PORS scale did not suffer drastic changes and proves to have strong reliability.

A Confirmatory Factor Analysis is usually used after an instrument underwent previous validation process such as an Exploratory Factor Analysis. Also, the instrument has passed the Cronbach's alpha critical value, a careful

index discrimination analysis, and at least has a significant convergent/divergent analysis. A CFA reaffirms the construct validity and reliability of the instrument, and the researcher may further test new theoretical grounds (Brown, 2015; Byrne, 2016). Removing the following item 22 to access a better fit model base on the statistical analysis, because it has AVE and CR validity issues and a better fit model was achieved (Fornell & Larcker, 1981).

The implications of the PORS scale may be a valuable instrument. It can be used in future studies and as a diagnostic tool for consultants to examine the perception of rumors and whether the employees express the presence of negative rumors in the workplace. The scale can be used in different types of work scenarios, such as in the public or private sector. The scale possesses strong psychometric properties, which confirms that the instrument can be applied in further research and tested in the many organizations in Puerto Rico. Also, the simple instructions on how to use the scale, and it is a friendly user instrument written in a modest Spanish language makes the PORS scale easy to administrate and evaluate the final results.

The PORS instrument's theoretical implication is the bidimensionality, which is the observed variables used to measure each dimension or each factor solution. The first step is to test the construct validity and reliability to corroborate the bidimensionality of the scale. In a theoretical, conceptual model, the construct validity, also known as the convergence of observed variables are related to the same latent variable or construct. The non-related observed variables from other observed variables connected to

other latent variables or constructs are the discriminant validity (Fornell & Larcker, 1981; Kline, 2005). In sum, the PORS instrument complies with the psychometric theories and according to DiFonzo and Bordia's (2013) and Buckner's (1965) literature review on rumors.

The results of the PORS scale show that there is a two-dimensional structure. Confirmatory factor analysis supports the two-dimensional structure of the PORS scale. It suggests that the instrument measures and taking into account organizational rumors workplace behavior. Both exploratory and analysis of confirmatory factors with the model of structural equations support structure internal of the PORS. Notably, the analysis of confirmatory factors with the model of structural equations supports the two-dimensional model structure; that is, the PORS scale scores underlie two constructs, thus supporting its internal structure. The Fit indices support the model since they were among acceptable values (e.g., Hair et al., 2010; Kline, 2016). The internal consistency of the reliability coefficients obtained in each dimension and the total score of the PORS scale version using the Cronbach's alpha formula. It is essential to point out that the PORS scale obtained an alpha coefficient above .70 accordingly to the literature recommendations (DeVellis, 2016). Also, to calculate the average score of the scale. First, sum all of the items in the set and divide it by the number of items.

Another theoretical implication that rumors may have on the organizations can have multiple factors. This study and the PORS scale confirm according to the literature review that organizational rumors are an omnipresent phenomenon,

and it will be present in the workplace. Evermore, there is a new literature review, and a plausible theory in the Puerto Rican work culture perceives rumors in the workplace. Also, Buckner's (1965) theory of rumor transmission and the definitions and concepts of DiFonzo and Bordia (2013) allowed for the development and construction and validation of the PORS instrument.

Based on a theoretical literature review, Aeen (2014) argues that rumors can cause an information gap and may trigger emotional tensions in workers. Even more, it can lead to fraud and deviation work behavior. Workers may use rumors with malice, and it can instigate threatening tensions with other colleagues and create a tendency in workers to act defiantly. Difonzo and Bordia (2013) point out that many studies on rumors usually focus on uncertainty and collective sense-making. However, rumors have other roles and play a part in human social behavior. Rumors used to justify a particular action and behavior. It may use as a form of revenge and used to cause harm and possibly punished by counter-retaliation.

Even today, the topic of rumors a neglected subject in management research, and many organizations refuse to acknowledge it (Difonzo & Bordia, 2013). Countless organizations may not report the victims of negative rumors, and numerous cases instead go unreported. The victims of negative rumors may cause employees to renounce their jobs, which may cause job rotation and turnover. There are times workers may act irrationally. They might quit their current jobs or counter-attack other co-workers. Out of fear, they may believe that the

organization is downsizing, and they feel that they need to survive by competing with other co-workers to secured their jobs. If an organization wants to survive, it needs to design a rumor free working environment. Also, the organization needs to train managers well to handle negative rumors, promote ethical behavior, and provide effective communication channels.

## Limitations of this study

The first limitation of this study was the small sample size since the results may not be generalized. A sample size of 150 is considered not adequate, according to some authors, when it comes to Confirmatory Factor Analysis (Brown, 2015; Byrne, 2016). The first model of a Confirmatory Factor Analysis rarely produces good results, and the scale needs to be adjusted and modified to reach optimal results. (Brown, 2015). Another limitation was the snowball sampling technique to reach the participants. Some authors do not recommend this type of technique as a robust method, and limitations are using this type of method (Tabachnick & Fidell, 2013). One of the most significant limitations was that a few of the organizations declined to participate, which had a detrimental effect on the outcomes of this study. Lastly, there is no abundant research on organizational rumors conducted in the organizations, and many academic scholars in Puerto Rico do not seriously study it. It was a constraint at the moment of this study to compare with a literature review of this type of organizational phenomenon.

## Recommendations

One of the first recommendations is to administrate the original 8-item PORS scale in a larger sample size of 300 or more. The larger sample size is needed in Confirmatory Factor Analysis to produce consistent results and further test the construct validity of the scale and in future studies. A sample size of 150 is not considered an adequate sample size. It is highly recommended to conduct a new study but with a larger sample size to keep the 8-item PORS scale intact. There are many different opinions by various authors of what is the best sample size for a Confirmatory Factor Analysis. Some authors argue that at least 300 is an adequate sample size, but others believe that it should be more than 300 or between 300 and 500 (Brown, 2015). Another recommendation is to conduct a new study of the PORS scale with a larger sample size in some of the public and private organizations in Puerto Rico. It is to reinsure the scale measures well the construct validity. Also, and to test if it fits well for the Puerto Rican workplace population and socio-cultural background.

After the PORS scale has been validated in a larger sample size in Puerto Rico, the next step is to perform a cross-cultural study in other Latin speaking countries. It is to test the construct validity of the scale further. Moreover, a cross-cultural study can help to examine if there is a sociolinguistic cultural background variation. Also, determine if the other Latin speaking countries perceive organizational rumors similar to the Puerto Rican sample. Conducting a cross-cultural study with new psychometric instruments can be another advantage for researchers to revise their

instruments are consistent and measure the construct validity well.

## Conclusion

Rivero (2013) argues when the organizations do not take actions to manage rumors. There is a chance that employees will see the rumors to be true. It may also have an impact on the organization. It can weaken the work productivity leading to profit loss and tarnishing the organization's image. Hozouria, Yaghmaeib and Bordbara (2018) state that when an organization is governed by organizational silence, employees are unwilling to form official communication channels. Employees must express and communicate their opinions and ideas. Often, employees will resort to an unofficial communication channel and listen to rumors as a reliable source of information. Organizational silence is another factor in organizational rumors. It may hurt the employee's commitment, and it can change over time when there is a proliferation of rumors in the workplace. Employees may renounce their jobs or show any interest in work productivity. As a result, the organization may suffer.

Rumors must be taken seriously, and the effects it has on the organizations. Scientific researchers should take this area of interest and examine its repercussions it may have on the organizations and human work relationships. These two factors play a significant role in socio-economic growth and work productivity in today's competitive job market. Lastly,

the PORS scale has proper psychometric properties, and it can be used in future studies for the Puerto Rican workforce population.

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