

## Fatalism and perceived stress relating to the COVID-19 pandemic of nursing professionals

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### ABSTRACT

**Introduction:** The nursing professional is paramount in dealing with the COVID-19 pandemic, changes in work organization and vulnerability may be related to fatalism and perceived stress, a neurological response that impacts people's quality of life. **Objectives:** To analyze the level of fatalism and perceived stress related to the COVID-19 pandemic in nursing professionals. **Methodology:** Quantitative study, correlational scope, observational, cross-sectional design. Sample of 551 nursing professionals from the state of Hidalgo, non-probabilistic, professionals working at the three levels of care, who agreed to participate and with internet access were included; after informed consent, the scale of fatalism related to COVID-19 and the scale of perceived stress related to the pandemic were applied through a Google Drive form. Statistical analysis was performed with SPSS version 24. **Results:** mean age 34.46±9.4 years, 89% women, 68% with Bachelor's degree, Catholic religion prevailed with 84.2%. 3.1% of the sample showed a high level of stress, 59.9% medium and 37% low; 61% showed fatalism absent before the possibility of infection by Coronavirus and 39% present. The correlational analysis showed that the level of stress and fatalism obtained  $Rho = -.236$  with a null negative correlation. **Conclusion:** There is no significant relationship between fatalism and the level of perceived stress related to the COVID-19 pandemic among nursing professionals.

**Keywords:** Fatalism; Perceived Stress; COVID-19; Nursing professional (DeCS).

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**Received:** 31/10/2020

**Accepted:** 22/12/2020

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## Fatalismo y estrés percibido relacionado con la pandemia de COVID-19 de los profesionales de enfermería

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### RESUMEN

**Introducción:** El profesional de enfermería es primordial para afrontar la pandemia de COVID-19, los cambios en la organización de trabajo y la vulnerabilidad pueden estar relacionados con el fatalismo y estrés percibido, respuesta neurológica que impacta en la calidad de vida de las personas. **Objetivo:** Analizar el nivel de fatalismo y estrés percibido relacionado con la pandemia COVID-19 de los profesionales de enfermería. **Metodología:** Estudio tipo cuantitativo, alcance correlacional, diseño observacional, transversal. Muestra de 551 profesionales de Enfermería del estado de Hidalgo, no probabilística, se incluyó a profesionales que laboraban en los tres niveles de atención, que aceptaron participar y con acceso a internet; posterior al asentimiento informado se aplicaron la escala de fatalismo relacionado con COVID-19 y la escala de estrés percibido relacionado con la pandemia, a través un formulario de Google Drive. El análisis estadístico fue realizado con SPSS versión 24. **Resultados:** edad media de  $34.46 \pm 9.4$  años, 89% mujeres, 68% con nivel Licenciatura, prevaleció la religión católica con 84.2%. 3.1 % de la muestra mostró nivel de estrés alto, 59.9% medio y 37% bajo; 61% evidenció fatalismo ausente ante la posibilidad de contagio por el Coronavirus y 39% presente. El análisis correlacional mostró que el nivel de estrés y el fatalismo obteniendo  $Rho = -.236$  con una correlación negativa nula. **Conclusión:** No existe una relación significativa entre el fatalismo y el nivel de estrés percibido relacionado con la pandemia de COVID-19 de los profesionales de enfermería.

**Palabras clave:** Fatalismo; Estrés Percibido; COVID-19; Profesionales de Enfermería (DeCS).

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## Salubridade e estresse percebido relacionados à pandemia de covid-19 em profissionais de enfermagem

### ABSTRATO

**Introdução:** O profissional de enfermagem é essencial para o enfrentamento da pandemia do COVID-19, às mudanças das organizações do trabalho e vulnerabilidade podem estar relacionadas ao estresse, que se resulta nas doenças neurológicas, que impactam a qualidade de vida das pessoas. **Objetivo:** Analisar o nível de salubridade e percepção de estresse relacionados à pandemia de COVID-19 em profissionais de enfermagem. **Metodologia:** Estudo do tipo quantitativo, escopo de correlação, desenho observacional, transversal. Amostragem probabilística de 551 profissionais de Enfermagem do Estado de Hidalgo, incluindo profissionais que atuavam nos três níveis de atenção, que aceitaram participar e com acesso à internet; Após o consentimento informado, a escala de salubridade relacionada ao COVID-19 e a escala de estresse percebido além da pandemia, foram aplicadas por meio de um formulário do Google Drive. A análise estatística foi realizada no SPSS versão 24. **Resultados:** média de idade de 34,46 ± 9,4 anos, 89% mulheres, 68% com grau de bacharel, a religião católica prevaleceu com 84,2%. 3,1% da amostra apresentou um nível de estresse alto, 59,9% médio e 37% baixo; 61% apresentaram fatalismo ausente devido à possibilidade de contágio pelo Coronavírus e 39% presente. A análise demonstrou que o nível de estresse e salubridade obtendo  $Rho = -.236$  com correlação nula negativa. **Conclusão:** Não há relação significativa entre o salubridade e o nível de estresse percebido relacionado à pandemia de COVID-19 dos profissionais de enfermagem.

**Palavras-chave:** Salubridade, Estresse percebido; COVID-19; Profissionais de enfermagem. (DeCS).

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## INTRODUCTION

COVID-19 implications are huge, at social, economical, cultural, and educational levels, and, of course, on the health system and its personnel of the country<sup>(1)</sup>. The pandemic has discovered the vulnerability of the health systems, as well as the lack of nursing professionals to face this situation from the front line of health care <sup>(2)</sup>. For the month of October, worldwide, there will be more than 44.5 millions of COVID confirmed cases and 1.1 millions of registered deaths in 216 countries; in the Americas 45% of the cases occur, which amount to more than 20 millions. In México 918,811 cases and 91,289 deaths have been registered, which represents a fatality rate of 10%, the highest in Latin America<sup>(3,4)</sup>.

Health professionals are essential to keep health services during the pandemic, since they work in the front line and carry out the clinical evaluation and administer the treatment to COVID-19 patients. One of the highest risks for the health system is the high rate of acute respiratory syndrome, which has increased by the need to rapidly increase the capacity of the intensive care units (ICU), the redistribution of clinical personnel to positions in the front line, and the hiring of labor force with little experience to respond to the pandemic <sup>(5)</sup>.

The vulnerability to COVID-19 infection can be associated to social inequalities, difficulties in the adoption and compliance of recommended measures, undesired effects, risk factors, and comorbidities which exacerbate the clinical picture and mortality due to COVID-19<sup>(6)</sup>. In Mexico, between February 28 (detection of the first COVID-19 case) and August 23, 2020, 97,632 COVID-19 cases were confirmed in health personnel, 42% of which corresponds to nursing professionals. In the same period of time, 1,320 deaths<sup>(5)</sup> were notified. The nursing professionals in their professional and academic roles experience and manage, on a daily basis, their own coping and that of the people they care for<sup>(7)</sup>.

Because of the increase of the demand of health care in hospitals, the hiring of personnel without experience, the absence of vulnerable

personnel either in safeguarding or in disability, the need to know the beliefs and repercussions in the mental health of the nursing professionals have emerged during the COVID-19 pandemic, and from this point, the following question is raised: Which is the relationship between fatalism and the level of perceived stress and the pandemic among nursing professionals of the state of Hidalgo, Mexico?

Paulo Freire stated that fatalism is a manifestation of meekness, product of a historical and sociological situation and not a essential trait of the form of being of the people, almost always is referred to as the power of the destiny<sup>(8)</sup>. Fatalism is conceptualized as a belief according to which everything that happens is inevitable, predetermined, or destiny; it is the submissive attitude of the person who does not see the possibility to change the course of adverse events. The chaos in society has unleashed a fatalist thinking which has been adopted by the health professionals, making them to feel constantly worried and with fatalist ideas<sup>(9)</sup>.

As antecedents Mejía y cols.<sup>(10)</sup>, in the work "Factors associated to fatalism before the COVID-19 in 20 cities of Peru in March 2020", reported that the percentages of those who said they highly agree or agree that they would depress or that they would die, that this situation means that the end of the world is close, or that they could make a fatal decision were high; the factors associated to a fatalist attitude during the COVID-19 pandemic in Peru were to be a women, older, high risk patient, and belong to a religion.

Stress is a neurological condition that can be a significant stimulus and can exacerbate manifestations of other illnesses<sup>(11)</sup>, the perception of stressing stimuli can vary and allows people to respond in an active way to the demands and conditions of the environment. Stress is a phenomenon that occurs due to excessive vital overload that surpasses normal self-regulatory possibilities. Work stress also includes a high personal, psychosocial, and economical cost<sup>(12)</sup>.

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The objective was to analyze the level of perceived fatalism and stress related to the COVID-19 pandemic of nursing professionals.

## **METHODOLOGY**

This is a quantitative study, of correlational scope, with observational and cross-sectional design; carried out on October 2020. The universe was of 5857 nursing professionals who worked in health institutions of the state of Hidalgo<sup>(13)</sup>; the sample was 551, non-probabilistic sampling. The call to participate was made through communication and information technologies. It was included those who accepted and granted their informed consent. The scales were applied through a Google Drive form. Three nursing professionals were excluded: Two teachers and one student; 29 questionnaires were eliminated because they were incomplete.

### **Study variables**

Fatalism means beliefs of extreme fatal consequences due to the infection and concern for the Coronavirus<sup>(9)</sup> infection.

Perceived stress is defined as the perception of work overload due to the COVID-19<sup>(14)</sup> pandemic.

### **Measurement instruments**

To measure the fatalism variable, the fatalism scale related to COVID-19 was used, which measures the perception/belief of potential situations after the Coronavirus contagion. This scale is comprised by 7 items; it has 5 response options: Totally disagree, disagree, indifferent, agree, strongly agree; it has a reliability coefficient higher than 0.7. Factor 1 (concern for the infection) and factor 2 (extreme fatal consequences due to the illness) were considered, with a cut point of 14, considering as present the one higher or equal than 14, and absent the one lower than 14<sup>(9)</sup>.

To evaluate the perceived stress, the perceived stress scale was used related to the pandemic, instrument that is comprised by 10 items, and 5 response options: Never, almost never,

sometimes, often, and always. Items 1, 2, 3, 6, 9, and 10 were scored directly from 0 to 4, and items 4, 5, 7, and 8, the opposite, that is, from 4 to 0. Considering the reliability with the Cronbach alpha between 0,65 y 0,86, the categorization of the results was: low, medium, and high<sup>(14)</sup>.

Moreover, sociodemographic variables were explored through questions with short responses and multiple choice responses.

### **Statistical analysis**

Data was unloaded in the Excel program. Data was codified and exported to the IBM SPSS software platform for Windows, version 24. Descriptive statistics and Spearman correlation were used in order to relate the variables fatalism and perceived stress.

### **Ethical considerations**

The participation of the health professional was voluntary and anonymous; before starting the questionnaire, the informed consent was placed. It is considered a research without risk according to the Regulations of the General Health Act for Health Research<sup>(15)</sup>. The research was recorded in the Escuela Superior de Tlahuelilpan.

## **RESULTS**

Study where 551 nursing professionals participated, whose age ranged from 18 to 67 years ( $34.46 \pm 9.4$ ), where 89% ( $n=492$ ) was women and 11% ( $n=59$ ) men; of this amount, 43% ( $n=239$ ) was single, 30% ( $n=163$ ) married, 22% ( $n=121$ ) in common law marriage, 4% ( $n=22$ ) divorced, and 1% ( $n=6$ ) widowed.

With respect to schooling, 68% ( $n=375$ ) had a Bachelors' Degree, 23.8 % ( $n=131$ ) technical studies, 5.6% ( $n=31$ ) a Master's Degree, 1.6 % ( $n=9$ ) a specialty; and assistant, .5% ( $n=3$ ), post-technical and PhD, .2% ( $n=1$ ) respectively. The most prevalent religion was Catholic with 84.2 % ( $n=464$ ) and Christian with 6.2% ( $n=34$ ). Seventy percent (70%) of the personnel mentioned not to have any vulnerability

condition to COVID-19, only 30% stated to have vulnerability conditions such as obesity, 12.2% ( $n=68$ ), systemic high blood pressure with 5.9% ( $n=33$ ), and diabetes mellitus II with 3.9% ( $n=22$ ).

66.6% ( $n=367$ ) was actively working in their work units and 33.4% ( $n=184$ ) was in safeguarding pursuant to the preventive measures to mitigate the impact of the pandemic caused by the SARS-Cov2 COVID - 19 in order to safeguard their right to health protection.

From the participant personnel, 77.3% ( $n=426$ ) was working in the Health Ministry, 14.2% ( $n=78$ ) in private institutions, 3.8% ( $n=21$ ) in IMSS, 2% ( $n=11$ ) in the DIF Children's Hospital, and .2% ( $n=1$ ) in SEDENA.

86.8% ( $n=478$ ) works only in one institution, 12.9% ( $n=71$ ) in two, and .4% ( $n=2$ ) in three institutions. 74% ( $n=408$ ) works in secondary health hospitals, 18.9% ( $n=104$ ) in primary care level hospitals, and 7.1% ( $n=39$ ) in third care level hospitals.

95.3% ( $n=525$ ) mentioned that in their work center COVID-19 patients are accepted, and only 4.7% ( $n=26$ ) said that their work center do not accept them. 70.3% ( $n=386$ ) is in the first line of care and 29.8% ( $n=164$ ) in different areas.

### Perceived stress level

Table 1 Frequencies of fatalism and stress level of nursing professionals of the state of Hidalgo, Mexico, 2020.

		Absent fatalism	Present fatalism	Total
Stress level	High	0	17	17
	Medium	186	144	330
	Low	150	54	204
Total		336	215	551

Source: Fatalism scale related to COVID-19 and the perceived stress scale related to the pandemic.  $n=551$

The variables fatalism and stress were related to the variables age, gender, marital status, schooling, religion, work center, healthcare level of the unit, people with COVID-19 in the work center, and if the person has been in safeguarding during the contingency, with a nil correlation ( $z \leq .1$ ).

The score general average of the stress scale of the health personnel who participated in the state of Hidalgo was  $15.69 \pm 6.7$  points equivalent to an average stress. 3.1% ( $n=17$ ) of the simple reported high stress levels, 59.9% ( $n=330$ ) medium stress, and 37% ( $n=204$ ) low stress.

### Fatalism

In relation to fatalism, it was seen that an average score of  $12.76 \pm 5.0$  evidenced an absent fatalism. 61% ( $n=336$ ) of the health personnel expressed absent fatalism before the possibility of infection by the Coronavirus and 39% ( $n=215$ ) showed present fatalism.

### Correlational analysis

Normality test of the sample through the Kolmogorov-Smirnov test, obtaining .058 with a  $p=.000$ ; thus, it is considered that it does not have a normal distribution.

The correlational analysis was carried out through the Spearman test; the score for the stress with a score of fatalism obtaining  $Rho=-.236$  with a nil negative correlation. Table 1 shows the data behavior.

## DISCUSSION

According to the study carried out by Mejía y Cols., in Peru in 2020, named "Factores asociados al fatalismo ante el COVID-19 en 20

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ciudades del Perú en marzo 2020" (Factors associated to fatalism before COVID-19 in 20 cities of Peru in March 2020), it was informed that most of the surveyed people who would suffer fatalism would be women showing higher percentage of depression and suicidal ideas<sup>(10)</sup>. Similar data was obtained in this study, since women predominate as part of the healthcare personnel.

In the Lieberoth y Cols.<sup>(16)</sup> study performed in 2020 in Mexico, named "Evaluación del estrés frente a la pandemia del COVID-19 en población mexicana" (Evaluation of stress in face of the COVID-19 pandemic in Mexican population) where it was found that the average of global index for the Mexican sample was  $M = 2.71$  ( $SD = 0.74$ ), which corresponds to a moderate stress data, with results similar to the ones obtained in the study where the nursing professional who participated, from the state of Hidalgo, was  $15.69 \pm 6.7$  equivalent points to medium stress according to Roy in the theory of the medium range of the coping adaptation process that explains the cognitive subsystem and the way to identify the skills that are used by the individuals to control the stress and promote adaptation<sup>(17)</sup>.

The situations in the hospitals is complex<sup>(1)</sup>. The fatalism and stress that are present in the nursing professionals; 66.7% has stated the need of mental health. At long term the pandemic has unchained biological and psychological problems, thus, it matches Virto Concha and cols.<sup>(18)</sup> regarding the implementation of mental health policies of personnel involved in the pandemic. Social support groups can be implemented and strengthen the family relationships of the nursing personnel to face the disruptive environment. During an epidemic overload of health services should be prevented, and reduce transmission<sup>(19)</sup>.

## CONCLUSIONS

There is a significant relationship between fatalism and the level of perceived stress of

nursing professionals related to the COVID-19 pandemic.

The level of absent fatalism is high, and the level of perceived stress is medium.

## Recommendations

Mental health is crucial in nursing professionals, and urgent in times of pandemic; lack of trained personnel, work load, and death of other professionals due to COVID can cause negative impact in the quality of life of the professionals, and consequently in the quality of the healthcare.

## Study limitations

Due to the pandemic, the research could not be carried out face to face. Communication and information technology for the collection of information was used. Likewise, it was not possible to present it before the Ethical Committee. Although it was a research without risk, the confidentiality and anonymity of the participants were preserved.

## CONFLICTS OF INTEREST

There are no conflicts of interest.

## FINANCING

The researchers themselves financed this work.

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