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Relationship between Coping Strategies and Burnout among Health and Safety Workers in an Algerian Refinery: The Moderating Role of COVID-19 Threat Perception

Baziz Amin[1*], Chaib Rachid [1], Aberkane Salah [2], Djebabra Mebarek[3], and Bougofa Mohammed[1]

[1]Laboratory of Transportation Engineering, BP 325, Constantine, 25017, Algeria;
[2]Departement of psychology, BP 1252 Road of Batna, Khenchela, 40004, Algeria; [3]Laboratory of Research in Industrial Prevention, Fesdis, Batna, 05078, Algeria
[*]E-mail: bazizamin@yahoo.com ;
Tel: +213656320278

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Abstract

The current study examined the association between coping strategies and job burnout among health and safety workers of Algerian petroleum refinery, exploring the moderating effect of COVID-19 threat perception. A cross-sectional study was conducted using a self-administrated structured questionnaire between August 2020 and September 2020 among 100 health and safety workers of an Algerian petroleum refinery. Correlations and Moderated linear regressions were used to analyze the data via SPSS V26 and process macro V3.5.3. Results were significant at CI=0.95 and p ≤0.05. The findings indicate that higher problem-focused strategies have been linked to reduced levels of burnout among health and safety workers (B= -4.225, SE= 1.262, p= .001). In contrast, emotion-focused strategies were not related significantly to burnout. COVID-19 threat perception acts as a moderator and mitigates the significant negative relationship between problem-focused strategies and job burnout (B= -1.1947; SE= .4720; p= .0130). This study contributes to new theoretical and empirical perspectives on the relevance of effective coping strategies to tackle burnout at the organizational and individual levels during the COVID-19 pandemic.

Keywords: Burnout; Coping strategies; COVID-19 threat; HSE workers.

Introduction

In today's rapidly changing world, work-related stress has emerged as a significant health issue of the era; employees today are constantly under the pressure of high workloads and organizational changes (Bergh et al., 2015). Occupational burnout is a serious and significant psychosocial disorder caused by inadequate management of chronic stress in the workplace (Raudenská et al., 2020). Schaufeli and Greenglass have defined burnout syndrome as being "a state of physical, emotional, and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding" (Schaufeli and Greenglass, 2001). Extensive evidence indicates that it can have detrimental consequences for individuals and organizations (Matin et al., 2012; Martínez et al., 2020); therefore, burnout prevention is a great need.

Burnout syndrome has emerged in a variety of occupations. Researchers have focused on this phenomenon in many occupational communities in the last few years. Former studies on burnout have mainly focused on academics, healthcare providers, policy staff, and other professional groups (Maslach & Leiter, 2016). Nevertheless, there is little investigation of particular occupational groups such as oil and gas workers (Dias et al., 2016). However, many scholars have expressed con-

cerns about increasing levels of stress in the petroleum industry (Saxena et al., 2020; Tong et al., 2020).

The oil and gas field is one of the most dangerous occupations worldwide; it is known to be one of the most stressful types of work (Khaksar et al., 2019). Workers in this field are exposed to increased stress levels due to permanent workload, shift work, unsafe conditions, repetitive tasks, and isolation like remote refineries and offshore facilities. In Algeria, the oil and gas field is the foundation of the country's economy; the fuel sector contributes 97% of the foreign revenue and covers more than 50% of the budget revenue (Aya, 2011). Therefore, the workers in this sector are constantly under the pressure of the continuing fuel products demand; subsequently, Algerian oil and gas workers are exposed to high levels of job overload. Unlike other workers in this field, health and safety (HSE) workers represent a specific group in this highly adverse area. They are responsible for employees' physical and psychological well-being in different production facilities. They should also ensure process safety by detecting gas leaks and other deficiencies. Oil and gas HSE workers perform in a competitive environment, executing tasks within limited deadlines with significant potential hazards. HSE workers generally have various responsibilities, considering production, reliability, and quality; this state of uninterrupted demands within a limited-resource environment could lead to burnout due to long-term exposure to occupational stress.

Demerouti and colleagues introduced a theoretical model related to the stress-strain association; this model entitled “the job demands-resources (JD-R) model”; according to the JD-R model, the psychological factors at work could be classified into resources and demands (Demerouti et al., 2001). Employees are more exposed to strain when job demands are more significant than their coping resources.

Numerous scholars noted that coping strategies are used to decrease burnout levels (Lee et al., 2016); coping strategies describe behavioral and cognitive attempts to mitigate the impacts of a stressful situation (Folkman & Lazarus, 1985) that are utilized when the demands of the situation surpass individual resources. Occupational demands are physical, psychological, or organizational characteristics of the occupation that necessitate persistent physical and/or psychological effort; therefore, these demands are related to some physiological and/or psychological consequences (Demerouti et al., 2001). Occupational resources enable individual growth and professional development and provide necessary tools to accomplish intended work objectives (Manzano García & Ayala Calvo, 2021). This motivational process facilitates an individual's ability to handle the work requirements and thus reduces burnout (Bakker & Demerouti, 2014).

Burnout occurs when a person's resources and coping strategies for managing chronic work-related stress are depleted. Folkman and Lazarus developed the problem and emotion-focused dimension, which is currently the most widely used method for categorizing coping behavior (Martínez et al., 2020). Problem-focused techniques are applied to decrease the perceived stress or enhance the available resources to cope by adjusting to the stressful situation (Boujut et al., 2016); these strategies involve active coping, planning, positive reframing, and the use of informational support. Emotion-focused strategies focus on reducing the stressor's negative impact by buffering uncomfortable emotions (Demerouti, 2015); such strategies include emotional support, venting, humor, acceptance, self-blame, and religion (Baker & Berenbaum, 2011).

Stress in challenging circumstances can affect many people; pandemics such as COVID-19 (the 2019 Coronavirus disease) can negatively affect an individual's mental state. The daily news reports and hyper-mediatization of statistics related to pandemics lead to increased anxiety and stress; as a result, populations cannot cope with and feel emotionally exhausted (Roy et al., 2020). As of August 2020, Algeria was facing the second wave of the global pandemic. The country regis-

tered more than 51530 cases, and more than 1736 had died from the deadly infection by the end of September (Worldometer info, 2020). Algeria has imposed severe public health restrictions in response to the pandemic, including temporary lockdowns, a virtual work policy in specific sectors, restrictions on traffic, a ban on large public events, closure of international borders, and limitation of domestic flights. It has also declared a national emergency state.

During this period, the work schedules of oil and gas employees in the isolated units were scrambled; subsequently, work/rest rotations were changed; since the company faced an unexpected situation. Some employees were obliged to work more than six continuous weeks instead of four weeks as their colleagues could not join their workplace due to infection, canceled flights, and transport restrictions. Hence, working under such circumstances engenders more psychological stress, leading to immediate and long-term psychological effects (Cai et al., 2020). There is evidence that experiencing fear due to the perceived COVID-19 threat can affect an individual's mental health (Abdelghani et al., 2020). Threat perception is relative to an individual's perception of how COVID-19 could result in negative adverse outcomes in their lives (Paredes et al., 2021); this perception has an essential contribution to the psychological adaptation of the individual (Pérez-Fuentes et al., 2020).

Individual resources effectively allow people to face the perceived threat (Hobfoll, 2002). However, situational variables such as the COVID-19 threat can raise demands, deplete resources, and decrease burnout levels. In this regard, this study suggests a new situational variable: the COVID-19 perceived threat. In this case, COVID-19's perceived threat could lead to an imbalance of demands compared to resources, contributing to the prevalence of psychosocial health issues like burnout syndrome.

Over the past decade, many studies have examined the association between coping skills and burnout, yet the results have been inconsistent (Yip et al., 2008). Overall, emotion-focused and avoidance coping are positively associated with burnout. In contrast, problem-focused coping relates to burnout negatively (Martínez et al., 2020; Muriithi et al., 2020). Based on what has been mentioned above; four hypotheses will be tested (see figure1):

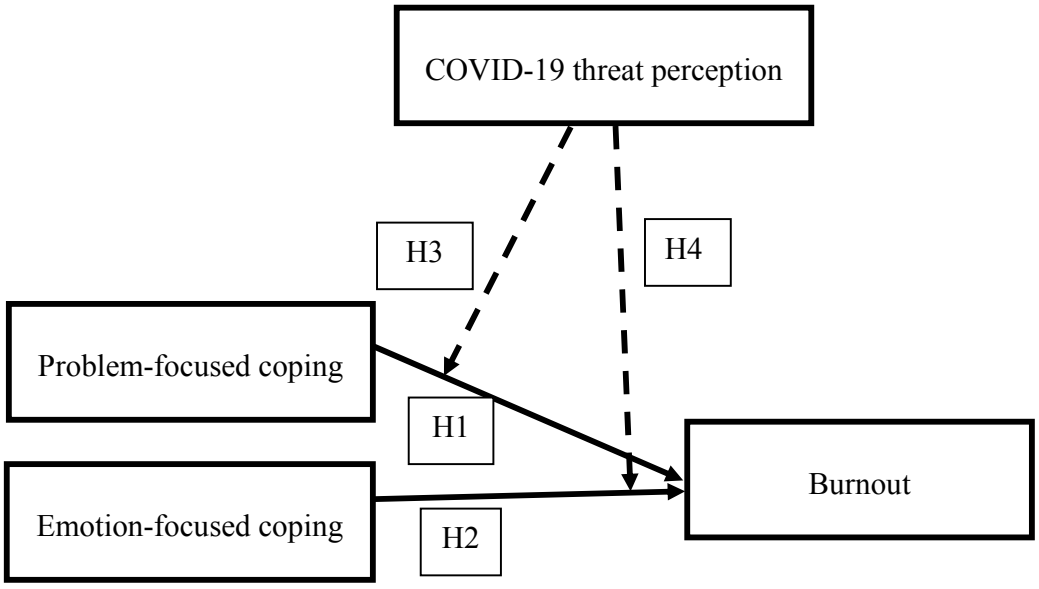

Figure 1. The theoretical model of the study, the mediator role of COVID-19 threat perception in the relationship between coping strategies and burnout

Hypothesis 1 (H1). There is a negative relationship between burnout syndrome and problem-focused coping;

Hypothesis 2 (H2). There is a positive relationship between burnout syndrome and emotion-focused coping strategies;

Hypothesis 3 (H3). COVID-19 threat perception moderates the relationship between problem-focused coping and burnout by mitigating their negative association;

Hypothesis 4 (H4). COVID-19 threat perception moderates the relationship between emotion-focused coping and burnout by reinforcing their positive association.

There is a lack of studies on burnout in the petroleum industry (Helles et al., 2000). Besides, it still a need for evidence about the effects of pandemic arrangements on burnout, specifically in this hostile area. Furthermore, there is limited knowledge of the dual impact of risk perception and coping strategies in the emergence of burnout. To the best of our knowledge, this is the first study about occupational burnout among health and safety workers; no studies have been identified for these susceptible groups or about the moderating role of COVID-19 threat perception in the relationship between various coping strategies and burnout in the oil and gas field.

Materials and methods

A cross-sectional study was conducted between August 2020 and September 2020 among 112 HSE workers in an oil refinery located in the southern desert of Algeria. The company employed about 391 health and safety workers in total. The study's overall aims and data treatment were explained to the human resources (HR) department.

Participants were informed that the study was about mental health during the COVID-19 pandemic before accessing the main questionnaire. Participation was entirely voluntary, and respondents could discontinue their involvement at any time; no monetary prizes were offered. Participants were requested to take their time to fulfill and return the questionnaire. All study participants provided informed consent. Confidentiality and anonymity were assured.

According to their work schedule, employees had to work four weeks on the refinery without interruption, followed by a 4-week recovery period at home. After this break, another 4-week work cycle would follow, and so forth. On each working day, they have to operate for a continuous 12 hours work shift.

Simple random sampling was applied, considering that half of HSE workers (N=196) were at work. The other half were home in a 4weeks/4weeks rotation system. The participants were agents, technicians, and engineers from the refinery's HSE department. Based on this, 112 questionnaires were distributed, and 100 questionnaires were returned and fully completed with a response rate of 89%. The high response rate (89%) may be explained by the fact of the voluntary nature of the survey, with no incentives. In addition, two researchers were available if additional information was requested; they also checked any missing information when the participants returned the question and asked them to complete the missing data.

The study is based on a structured administered questionnaire comprising 68 items divided into four sections. The first part was about sociodemographic variables such as age, experience, marital status, educational status, and professional title. The second section was related to COVID-19 threat perception using the five items of the Brief Illness Perception Questionnaire (BIPQ-5). The third section estimated the burnout syndrome among HSE workers using the Oldenburg Burnout Inventory (OLBI-16 items), and the last section consists of the 28 items of the Brief cope inventory scale. The Cronbach's alpha coefficients showed good values ranging from 0.702 to 0.82 (See table 1).

Experienced job burnout was assessed using the OLBI (Oldenburg Burnout Inventory); in this scale, burnout is operationalized through exhaustion and disengagement. The OLBI comprises 16 items formulated positively and negatively to assess the two dimensions of burnout based on a 4-point Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree).

Table 1 .The consistency of study constructs

Scale	Alpha Cronbach	Number of items
Problem- coping	.728	04
Emotion- coping	.702	06
BIPQ of COV-19	.743	05
OLBI	.82	16

OLBI: Oldenburg Burnout Inventory.

Although the Maslach Burnout Inventory (MBI) is the most common measure used by researchers in burnout studies (Shirom & Melamed, 2006), many scholars have criticized the psychometric qualities of the MBI. Emphasizing that it only measures emotional exhaustion and the wording of its items is one-sided (Reis et al., 2015). Many researchers have reported that emotional exhaustion and depersonalization are essential burnout elements (Büssing & Glaser., 2000). However, the third component, reduced personal accomplishment, is not believed to be a critical dimension of burnout, it is less prevalent, and its stability corresponds to a personality trait (Kristensen et al., 2005). Based on this, the OLBI was used as a valid instrument for measuring burnout in occupational and academic populations (Reis et al., 2015).

The BIP-Q5 was adapted for a brief assessment of disease perception, valid for populations with specific diseases and large-scale studies (Alatawi et al., 2020). BIP-Q5 was applied in this context to assess the perceived threat of COVID-19; the scale includes five items regarding the perception of the disease threat, in which the respondents estimate their agreement with each statement on a 0-10 Likert scale. The test provides a global score on the disease representation. The higher the score, the more significant the disease is regarded as a threat. The BIP-Q5 shows good psychometric properties and has demonstrated good reliability indicators in a large-scale population in various countries (Valero-Moreno et al., 2020).

The Brief COPE (Coping Orientations to Problems Experienced) Inventory consists of 28 items, divided into two scales representing 14 different possible coping strategies used against stressful events. However, the scale was adjusted regarding the problem and emotion-focused strategies to cope with the COVID-19 pandemic, items related to avoidant coping strategies were excluded as they are not included in this study. The scale is designed primarily to understand how often people use different coping strategies to cope with stressors (Girma et al., 2021); the scores were calculated without reverse coding. Respondents replied to a Four-point Likert scale from 0 (I did not do it at all) to 3 (I did it a lot) to identify the use frequency of each coping behavior. The total result was obtained by summing up the scores for each item.

All data and variables were checked for normality, completeness, collinearity, and internal consistency. Pearson's correlation and variance inflation factor (VIF) analysis were conducted to analyze the association between variables. This procedure allows for checking any probability associated with multi-collinearity, which is considered if the correlation between variables is more than 0.5 ($r>0.5$) or VIF is superior to 2.5 (Johnston et al., 2018). Multiple linear regression analysis was performed to examine the nature and significance of the relationship between burnout and coping

strategy types. Additionally, moderation analysis was conducted to examine the moderation effect of COVID-19 threat perception and compare the mean perceived burnout level difference between different coping strategies. All analyses were conducted by IBM SPSS Statistics version 26. Moderation analyses were carried out using PROCESS version 3.5.3 by Andrew F. Hayes. All results were considered statistically significant if the significant probability was below 5% ($p < 0.05$) and the 95% CI.

Results

The socio-demographic characteristics of the respondents, including the frequency of gender, age, experience, marital status, and education level, are presented in Table 2. The average age of the participants was 34.76 years (SD: 6.54; range: 26–54 years). The great majority of the respondents were men (98%). All the participants had a fixed contract. On average, the mean duration of professional experience was 8.82 years (SD: 6.17; range: 1–43 years). Our study contains 100 HSE workers (15 agents, 46 technicians, and 39 engineers) with varying levels of burnout. Based on the cut-off mentioned in the study by Delgadillo et al. reported, participants are identified as having low, medium, or high burnout scores, according to scores above or below one standard deviation of the mean (Delgadillo et al., 2018). Representing 13% of the whole sample: 13 workers reported mild burnout, 73 reported moderate burnout (73%), and 14 reported high burnout (14%).

Table 2. Demographic characteristics of study participants

Variable	**Mean ± SD /Category**	**Frequency** N (%)
Age (mean ± SD)	34.76 ± 6.54	/
	18 years to 30	34 (34%)
	31 to 45	58 (58%)
	46 to 60	8 (8%)
Experience	8.82 ± 0.617	/
Gender		
	Male	98 (98%)
	Female	2 (2%)
Marital status		
	Single	34 (34%)
	Married	66 (66%)
Education		
	Secondary	8 (8%)
	Bachelor's degree	3 (3%)
	License	32 (32%)
	Postgraduate	57 (57%)
Function		
	Agent	15 (15%)
	Technician	46 (46%)
	Engineer	39 (39%)

SD: Standard Deviation

A correlation analysis was conducted before running the statistical analysis to ensure that data did not show multicollinearity. The correlations between coping strategies used by participants

against stressors at work, risk perception of COVID-19, and burnout level were tested using Pearson correlation (see table 3). Results indicate that no strong interaction exists between considered variables ($r<0.51$).

Table 3. Correlations amongst variables

Variables	Mean	SD	1	2	3	4	5	6
1. Age	34.76	6.53	-					
2. Experience	8.82	6.17	.888**	-				
3. problem-focused coping	3.06	0.49	.070	-.002	-			
4. Emotional coping	3.04	0.54	.117	.110	.508**	-		
5. Burnout	38.63	6.48	-.046	-.041	-.320**	-.171	-	
6. Covid-19 threat	3.71	2.47	.182	.270**	.096	-.21*	.02	-

*. Correlation is significant at the 0.05 level (2-tailed); **. Correlation is significant at the 0.01 level (2-tailed).

Additionally, the variance inflation factor (VIF), which assesses the degree of multicollinearity in the regression analysis, was checked. Results are presented in Table 4. The results suggest the absence of collinearity between the study variables (burnout, problem-focused coping, Emotion-focused coping, and COVID-19 threat perception) as VIF<2.5.

Table 4. Variance inflation factor results

Variables	1	2	3	4
1. problem-focused coping	-			
2. Emotion-focused coping	1.166	-		
3. Burnout	1.388	1.413	-	
4. COVID-19 threat	1.504	1.373	1.118	-

Multiple regression and moderation analyses were carried out to examine the association between different coping strategies and burnout and to investigate if COVID-19 threat perception is a moderator in this relationship. The results of multiple regression analysis are displayed in Table 5.
The linear regression between different coping strategies and burnout syndrome revealed different results; active coping is negatively and significantly related to burnout (B=-4.225, SE=1.262, p=.001); these findings support the earlier hypothesis (H1).

A negative relationship was found between emotional coping strategies and burnout syndrome (B=-2.042, SE=1.189, p=.08) but it was not significant, although emotional coping predicts disengagement negatively (B=-1.721, SE=.659, p=.01), these results reject the hypothesis established earlier (H2).

Table 5. Multiple regression results

Tested relationships	*B*	*p-value*
Problem coping and burnout	-4.225**	.001
Emotion coping and burnout	-2.042	.089
COVID-19 threat and burnout	.059	.825
Problem coping and COVID-19 threat	.484	.342
Emotion coping and COVID-19 threat	1.006*	.027

**. Correlation is significant at the 0.01 level; *. Correlation is significant at the 0.05 level.

The model summary of moderation analysis between focused coping with burnout presents significant results (see Table 6); linear regression analyses indicated that the COVID-19 threat perception had a pronounced impact on the relationship between problem-focused coping strategies and burnout among HSE workers (p=.0037, LLCI=-2.130, ULCI=-.2575) this result supports H3. This moderation effect was not observed in the relationship between emotion-focused coping and burnout (p=.03202, LLCI=-1.521, ULCI=.5028) these findings reject H4. In this model, Problem-focused coping explains around 17% of the variance in burnout syndrome (R^2=16.72%).

Table 6. Summary of moderation analysis between focused coping and emotion coping with burnout

	R	R-sq	P value	Interaction coefficient	LLCI	ULCI
Coping-focused and burnout moderation	.4089	.1672	.0037*	-1.1947	-2.130	-.2575
Emotion-focused and burnout moderation	.2116	.0448	.4969	-.5094	-1.521	.5028

*. The result is significant at the 0.05 level (2-tailed).
LLCI= Lower confidence interval
ULCI= Upper confidence interval

Looking into the scatter plot diagram (see figure 2) and then using the Johnson and Neyman significance regions, it can be figured out that the varying level of COVID-19 threat perception brings different impacts on the level of burnout. Both average (B=-4.66, SE=1.2706, p=.0004), and high levels (B=-7.7879, SE= 1.8409, p=.0001), of COVID-19 threat perception; significantly mitigate the negative association between problem-focused coping and burnout. However, this significance was not observed at a low level of COVID-19 threat (B=-1.9418, SE=1.5975, p=.2272).

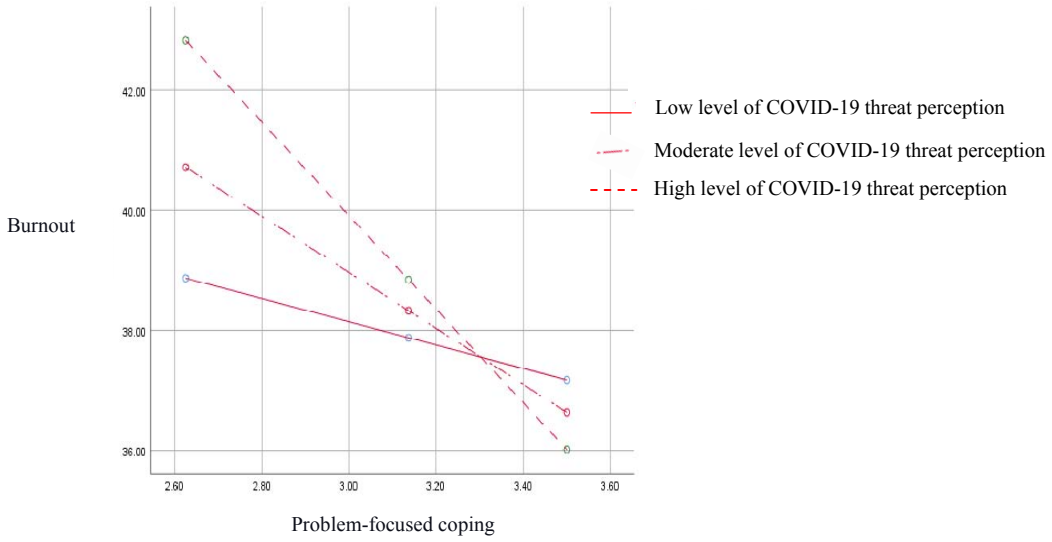

Figure 2. Effect of low, moderate, and high perceived threat of the COVID-19 pandemic on the association between problem-focused coping strategies and burnout

Discussion

In this study, a moderate emergence of burnout was observed among HSE employees; 73% of the participants had moderated level of burnout (mean interval [2.01-2.81]), and more than 14% of employees met the criteria of high burnout (mean interval [2.82-3.88]). These results support previous studies that have illustrated how health and stress-related issues are more critical in industries like oil and gas (Berthelsen et al., 2015; Jiang et al., 2018; Tong et al., 2020). As mentioned earlier, HSE workers in oil and gas fields are a particular occupational group; they perform in a hostile environment, with significant responsibility, work extended shift hours, and are exposed to hazardous substances. These factors increase demands on employees and reduce their resources significantly. Often oil and gas employees work on relatively remote sites, away from their families and friends, and their social environment is simple, with limited social support (Sun et al., 2020). This combined factor advocates HSE workers to burnout, negatively affecting their physical and mental health and workability. Furthermore, the COVID-19 outbreak had a significant psychological impact on the prevalence of burnout levels in the study's sample; workers have to face the fear of being infected or infecting their families once they return home. Many workers have been frequently quarantined when they contacted suspected cases of COVID-19 or when they present symptoms like fever; the COVID-19-related health situation created a sense of fear and worry that may lead to burnout's prevalence (Manzano García & Ayala Calvo, 2021).

Using a T-Test analysis, a slight difference was observed between the means of problem-focused and emotion-focused strategies, 3.06, and 3.04, respectively. However, this difference is statistically significant ($p<0.01$). Respondents tend to use problem coping strategies more. In their cross-sectional study, Krok et al. found that the perceived risk of being infected with COVID-19 is associated with more problem-focused strategies (Krok & Zarzycka, 2020). In a recent survey among a Pakistani sample, participants reported more tendency to use problem-focused strategies to deal with COVID-19 related-issues stressing events (Rana et al., 2021). One explanation is that HSE workers generally look for solutions to maintain production and avoid hazardous situations that could affect individuals or equipment; this active reaction toward solving problems results from their "HSE thinking" and limited work environment. In this survey, men are the dominant gender component among HSE workers (98%); it is known that oil and gas are male-dominated sectors (Ragnhild, 2017). Given the imposed gender roles in their society, men usually do not talk about the difficulties they encounter and have limited ways of relieving stress. In addition, men are subject to stigma for recognizing and seeking out mental illness (Tynan et al., 2016), which clarifies their less use of emotional coping strategies such as looking for social support. Studies have indicated that individuals may react differently to the emotional distress resulting from such traumatic events as the COVID-19 outbreak (Killgore et al., 2020).

Our research results indicate that the frequent use of problem-focused coping is related negatively to high levels of COVID-19 threat perception and high burnout levels. These findings are in line with previous studies. In their Meta-analysis research, Shin et al. suggested that increased risk perception was associated with the more prevalent use of problem-solving strategies, which was positively related to increased psychological well-being levels (Shin et al., 2014). In other words, when individuals engage in problem-focused coping more frequently, they are better positioned to confront the crisis and engage in problem-solving; thus, they experience decreased burnout levels (van der Colff & Rothmann, 2009). A reasonable interpretation is that HSE workers in the oil and gas industry developed rational risk assessment thinking through their training and educational background. Hence, they tend to use likely, rational problem-solving when facing any issue or occupational stressors that are susceptible to emerge in their work environment.

Surprisingly, no significant relationship was found between emotion-focused coping and burnout; however, emotional coping predicts disengagement negatively. These findings are in contradiction with Shin et al. findings (Shin et al., 2014). In two other studies, emotion-focused coping strategies were positively associated with three burnout components, whereas problem-focused coping strategies negatively predicted burnout (Boujut et al., 2016). Differences in the populations under consideration could also explain these inconsistencies; in our results, 98% of the participants were men, which tend to use more problem-focused coping. Moreover, certain coping strategies may be more or less effective in different populations. These inconsistent findings further support Folkman and Lazarus' (1980) argument that the effectiveness of a specific type of coping strategy in mitigating the effects of stressors depends on the type of these stressors, situational characteristics, and the job specifications (Yip et al., 2008).

Our results showed that the perceived threat of COVID-19 acts as a moderator in the relationship between problem-focused coping strategies and burnout; more specifically, the perceived threat of COVID-19 was demonstrated to reduce their negative relationship; one explanation is that perceived threat further triggers individuals' own concerns about their future situation, resulting in the appearance of adverse perceptions about possible future consequences (Paredes et al., 2021). People who face threats use coping strategies that allow them to handle the menace. However, when coping strategies are dysfunctional, the individual is at greater risk of experiencing burnout (Delelis et al., 2011). Threatening situational variables such as COVID-19 depleting resources and affecting the ability of people to manage stress successfully and, as a result, could affect their well-being (Li et al., 2020). Notably, our study was conducted during severe lockdown measures, which the government and the company implemented to limit the spread of COVID-19 infection. Moreover, in this crisis, HSE workers faced problems related to hierarchical organization, scrambled work and rest schedules, suspended projects, and unexpected situations. Workers were in a state where they had to avoid infection as much as possible while maintaining appropriate service levels and safety requirements.

The decreased level of using problem-focused coping strategies and the increased threat perception of COVID-19 are risk factors that increase burnout levels among HSE workers. Nevertheless, these findings could not be generalized since the factors contributing to burnout are complex, interventions must be multidimensional, and strategies taken into account should consider all the sources of stressors (Lee et al., 2016).

Further studies are needed to understand better the relationship of different coping strategies within the stress-burnout interaction; this could help to determine effective coping strategies to reduce occupational stress and burnout, which will increase well-being and efficacy (Wallace et al., 2010). It requires various cognitive and behavioral coping mechanisms to deal with the different sources of work-related stress (Montero-Marin et al., 2014). Therefore, it is essential to develop successful coping strategies adapted to the specific characteristics of the profession of workers, to reduce the emergence of burnout syndrome. Moreover, it is vital to understand how some coping strategies influence efficiently better than other strategies when facing threats without developing burnout symptoms (Yip et al., 2008). Therefore, the employees can perform effectively and efficiently. Oil and gas organizations should implement effective strategies to mediate the adverse outcomes of job-related stressors on burnout syndrome. Individuals should be informed by human resources and employers about the importance of these strategies, allowing them to make more effective coping choices (Demerouti, 2015).

Conclusion

The effects of burnout on workers' well-being have emerged as a growing challenge for the global occupational health community. The combination of challenging work environment conditions and the COVID-19 pandemic threat has a significant negative impact on oil and gas workers' physical and mental well-being. Our results support the idea that rational problem-solving training on coping with stressful situations is an effective intervention to mitigate or prevent burnout overall, this is considered desirable and practicable during the COVID-19 pandemic.

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