

Burnout and Self-Perceived Stress in Workers in Essential Services after the Impact of Hurricanes Irma and Maria

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Objective: To examine the levels of burnout and self-perceived stress in workers at the Puerto Rico Electric Power Authority, who experienced major disasters: Hurricanes Irma and Maria.

Methods: A quantitative descriptive cross-sectional study with a non-probabilistic convenience sample was conducted in workers at the Puerto Rico Electric Power Authority. A structured questionnaire was administered to a sample of 163 eligible participants, aged 21 years and older, who participated voluntarily. Using employees of the electric company, the study examined the relationships between burnout and several characteristics (years of employment, existing health conditions, and coping strategies) both before and after Hurricanes Irma and Maria. Burnout was assessed with Gil-Monte's Spanish Burnout Inventory, and self-perceived stress was assessed with the 14-item Perceived Stress Scale.

Results: Before the hurricanes, 16.6% of the workers reported high levels of burnout syndrome, while, after the hurricanes, the proportion increased to one-fifth (20.9%). Prior to the 2 hurricanes, more than one-fourth (23.4%) of the sample reported being extremely stressed; after the hurricanes, that proportion increased to 55%. Factors such as years of employment, counseling, and self-perceived stress showed significant statistical associations ($P < .05$) with burnout.

Conclusion: From a public health standpoint, priority should be given to this population, thereby preventing burnout and any other negative effects of the aftermath (i.e., the lengthy response, recovery, and reconstruction) of these kinds of major disaster. [*PR Health Sci J* 2022;41(2):74-81]

Key words: Burnout syndrome, Hurricane, Disaster, Self-perceived stress, Puerto Rico Electric Power Authority

Disasters are a priority issue in public health and can cause a serious disruptions in the daily activities of individuals, communities, and society, as well as material, economic, and environmental losses, these losses evidence the physical, emotional, and social vulnerability of the affected place (1). Previous research has documented the presence of emotional disorders in professionals involved in rescue and/or relief efforts following disasters. However, few studies have investigated how exactly the personnel involved in the disaster rehabilitation and reconstruction phases after a catastrophic situation are affected in terms of emotional problems and burnout symptoms (2,3). After a disaster, essential workers are exposed to long working schedules, since the primary function of these workers is to restore services to their previous states. This increases stress levels and can even cause burnout syndrome (BurnSyn) (2).

Complex emergencies can bring an emotional burden and distress to people directly working in response, recovery, and reconstruction processes. Exposure to trauma, either primary or

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secondary, increases emotional and psychological risks (4). The research highlights that workers involved in the response and recovery phases are highly susceptible to post-traumatic stress disorder (PTSD) and other trauma related to emotional and/or mental illnesses, although the empirical findings have not been consistent. Chronic stress has the potential of deplete energy, undermine beliefs, reduce abilities and efficacy in the person, and can lead to burnout (5) which is the greatest occupational risk of the 21st Century (6,7).

The outcomes of BurnSyn have been studied over the years (8). This syndrome has become identical with those psychosomatic, psychosocial symptoms and social consequences that result from a workload that exceeds the individual's capacities and resources (8). The consequences are associated with high levels of stress and involve serious physical and emotional health implications (9). Studies showed that workers from the public sector presented an increased intensities of perceived stress, and that those exposed to chronic stress may experience BurnSyn (10, 11).

Previous research has explored disaster situations, to examining their effects on BurnSyn and perceived stress in workers (11). Results of the previously mentioned studies have shown that essential workers with more than 10 years of service who are directly exposed to a disaster, and as result suffer losses and/or damages to their homes, a lack of social support, and high levels of stress, are at increased risk for the development of BurnSyn (11). These workers have daily exposure to critical incidents, given the services they provide, and both during and in the aftermath of a disaster, these individuals might have long working hours to comply with their vital role in response, recovery, and reconstruction. Following a large scale disaster, the impact of that disaster on mental health and BurnSyn in essential workers is a critical public health issue and requires immediate attention (12,13) because of the potential consequences to workers, their families, the work organization environment, and the communities workers serve (1, 14).

Burnout syndrome is a response to chronic work stress related to work; it occurs mainly in professions that focus on the provision of essential services (5). The type of BurnSyn that results from disasters, has a severe impact on the quality of life and day to day living of essential workers (1). Burnout syndrome presents 3 psychosocial features in the affected person: emotional exhaustion, depersonalization, and reduced personal accomplishment (15). Emotional exhaustion is the main symptom of BurnSyn (16), and is defined as the feeling of not being able to give more of oneself, emotionally, in terms of self-efficacy and/or perceived competence. The personal resources of emotionally exhausted individuals tend to be depleted, causing those individuals to withdraw and use avoidance strategies to protect themselves from damage (or further damage, as the case may be) to their health (17). Depersonalization manifests itself as a distant attitude towards work, as well as towards the people with whom the exhausted individual interacts within the workplace. (18). When emotional

exhaustion and depersonalization occur, there is a reduced sense of personal accomplishment, including negative evaluation, to the point of that person's doubting his or her contribution to and capabilities at work (19).

The Substance Abuse and Mental Health Services Administration recommends educating workers not only on strategies for stress prevention and management but also on strategies for coping skills, and well-being. Working with people affected by disasters is very challenging and produces high levels of stress (20).

The purpose of this study was to describe burnout symptoms and self-perceived stress in essential service workers at the Puerto Rico Electric Power Authority (PREPA), following the impacts of Hurricanes Irma and Maria on the island of Puerto Rico.

Methods

Study design

In June and July of 2018, a descriptive cross-sectional study was conducted with a non-probabilistic convenience sample of 163 adults working at PREPA. The Sample selection was done with the help of PREPA leaders, and recruitment was carried out in several areas around the island that had regained some measure of accessibility after the hurricanes. At the time of the study, the agency's workers were still engaged in the reconstruction process and for this reason, it was not possible to reach all the areas that the organization covered. The study was approved by the University of Puerto Rico, Medical Sciences Campus Institutional Review Board, and the participants' consent was obtained prior to their filling out the survey.

Study population

A total of 163 eligible participants completed the survey. Per the inclusion criteria, the participants had to be 21 years of age or older, employees of PREPA, be voluntary participants, and read, speak, and write in Spanish. In addition, they had to be on the island during Hurricanes Irma and Maria and have been involved in the response, recovery, and reconstruction processes. The exclusion criteria excluded those workers who were not on the island during the impact of the hurricanes and those who could not read, speak and write Spanish. The interviews were performed during the participants' working hours, taking into consideration their availability to complete the survey. The time needed to answered the questions on the survey was 45 to 55 minutes.

Instruments

The survey included questions about demographics, the "Cuestionario para la Evaluación del Síndrome de Quemarse por el Trabajo" (CESQT, Spanish acronym) (21,22) the Perceived Stress Scale (PSS-14) (23), and questions about coping strategies. Permission of use for CESQT, and PSS-14 were obtained for this study, and their questions were assessed before and after the 2 hurricanes.

Statistical methods

The univariate analyses consisted of frequency distributions and measures of central tendency such as median, mode, standard deviation, and dispersion. The bivariate analysis included an independent Chi-square statistical test to explore associations between BurnSyn and individual, social and organizational factors. All data were analyzed using SPSS version 17 (24).

Results

The sample consisted of 163 public servants employed by PREPA. The distribution of the sample by sex was 89.0% (n = 145) men and 11% (n = 18) women. The largest single age group was 44 to 50 year olds (40.5%; n = 66). Regarding education, 30.7% (n = 50) reported having completed a baccalaureate degree/but not a master’s degree. In terms of distribution by marital status, 66.3% (n = 108) reported being married. In terms of the number of people residing in a given participant’s home, 59.9% (n = 97) reported living with 1 to 4 people (Table 1).

Table 1. Demographic characteristics of the study participants

Demographic Characteristics	N	%
Sex		
Male	145	89.0%
Female	18	11.0%
Age		
37–35 yrs.	12	7.3%
36–43 yrs.	39	23.9
44–50 yrs.	66	40.5%
51–58 yrs.	36	22.1%
59–66 yrs.	9	5.5%
67 or more yrs.	1	0.6%
Education		
Did not complete a higher educational degree	37	22.7%
Associate degree	27	16.6%
Completed a baccalaureate degree/master’s degree not completed	50	30.7%
Marital status		
Married	108	66.3%
Living with partner	21	12.9%
Separated/divorced	21	12.9%
Single	12	7.4%
Widowed	1	0.6%
People residing at home		
1–4 persons	97	59.9%
5 or more	65	40.1%

Table 2 shows health conditions diagnosed before and after the hurricanes; more than one-third of the sample (35.3%) reported having been diagnosed with hypertension before the hurricanes. According to the participants’ reports, the after-hurricane numbers tripled with regard to both insomnia (20.3%) and depression (16.5%) diagnoses and nearly doubled in terms of anxiety diagnoses (16.5%).

Table 2. Conditions diagnosed before and after Hurricanes Irma & Maria

Diagnoses	Before Hurricanes Irma & Maria		After Hurricanes Irma & Maria		Total n
	n	%	n	%	
Hypertension	61	35.3	12	15.2	73
Diabetes	13	7.5	3	3.8	16
Arthritis	14	8.1	2	2.5	16
Cardiovascular diseases	8	4.6	5	6.3	13
Insomnia	10	5.8	16	20.3	26
Asthma	10	5.8	3	3.8	13
Anxiety	17	9.8	13	16.5	30
Cancer	3	1.7	1	1.3	4
Depression	9	5.2	13	16.5	22
Other	28	16.2	11	13.9	39

Note: Other self-reported diagnosed conditions among the study participants included kidney diseases (n = 2), sleep apnea (n = 4), gastroparesis (n = 1), anemia (n = 1), pre-diabetes (n = 1), muscle spasms (n = 1), hypoglycemia (n = 1), lupus (n = 1), attention deficit disorder (n = 1), fibromyalgia (n = 2), hernia, stress (n = 2), high cholesterol (n = 2), bipolarity (n = 2), hypothyroidism (n = 2), hernia in the esophagus (n = 2), tinnitus (n = 2), pinched (compressed) nerve (n = 1), panic attacks (n = 2), gastritis (n = 2) and blood clot in the leg (n=2).

Table 3 presents the distribution of self-reported changes in behavioral patterns after the hurricanes. More than half of the sample (62.7%) presented changes in behavioral patterns (such as increased frustration), while half of the sample (50.8%) presented sudden changes of mood and almost half of the sample (47.5%) presented patterns of impatience.

Table 4 shows the percentage distributions of extra hours worked, self-perceived stress levels in the workplace, and the possibility of developing BurnSyn before and after Hurricanes Irma and Maria. Regarding extra hours worked (weekly), 53.4% of the sample reported having worked from 1 to 4 extra hours per week before the hurricanes. However, the results show that more than half (56.6%) of the participants reported working from 5 to 9 extra hours after the hurricanes. With respect to self-perceived stress levels in the workplace before

Table 3. Changes in behavioral patterns reported by participants indicates that the Hurricanes caused the changes Hurricanes Irma & Maria

Behavioral pattern	n	%
Sudden changes of mood	60	50.8
Fatigue	52	44.1
Low self-fulfillment	17	14.4
Low self-esteem	12	10.2
Frustration	74	62.7
Impatience	56	47.5
Other	29	24.6

Note: Other behavioral patterns that changed in the study participants included despair (n = 1), tiredness (n = 6), the feeling of being overwhelmed (n = 1), anger with daily living (n = 1), stress (n = 2), post traumatic stress disorder (n = 1), anxiety (n = 5), depression (n = 1), he needed to be at home and share with his daughters (n = 1), burnout (n = 1), work pressure (n = 1), the feeling that there was no time for anything but work (n = 1), injustice towards the worker, (Americans come to P.R. and earn five hundred dollars a day) (n = 1), occasional panic attacks (n = 1), fear and insecurity (n = 1), back pain (n = 1) and disappointment (n = 1).

Table 4. Percentage distribution of extra hours worked weekly, self-perceived stress levels in the workplace, and possibility of developing burnout syndrome before and after Hurricanes Irma & Maria

	Before Hurricane Irma & Maria		After Hurricane Irma & Maria		P-value
	n	%	n	%	
<i>Extra hours worked weekly</i>					
0	52	31.9	8	4.9	.001
1 to 4	87	53.4	64	39.3	
5 to 8	15	9.2	80	49.9	
9 or more	9	5.5	11	6.7	
<i>Self-perceived stress level in workplace</i>					
Not/slightly stressful	89	54.4	35	21.5	.001
Moderately stressful	36	22.1	39	23.9	
Highly/extremely stressful	38	23.3	89	54.6	
<i>Possibility level of developing burnout syndrome</i>					
Low	82	50.3	69	42.3	.001
Medium	54	33.1	60	36.8	
High	27	16.6	34	20.9	

the hurricanes, more than a half of the participants perceived their workplaces to be not/ or only slightly stressful (54.4%). After both hurricanes, the distribution showed that more than 50% (54.6%) perceived their workplaces to be highly/extremely stressful. About the possibility of developing BurnSyn among PREPA employees before and after the hurricanes, our assessment showed that before the hurricanes, a little more than 50% (50.3%) of participants had a low possibility of developing this syndrome. In more than half (57.7%) of the respondents, the possibility of developing BurnSyn increased to being moderate or high after the 2 hurricanes.

When examining the relationship between the possibility of developing BurnSyn and workplace characteristics, we noted that the results showed a significant statistical association in terms of level of self-perceived stress (P = .003) before Hurricanes Irma and Maria. After the hurricanes, the region in which a given worker was stationed (P = .019), the position held by that worker (P = .045), hir or her length of employment (P= .017), and that individual's level of self-perceived stress in the workplace (P= .001) showed significant statistical associations in terms of the possibility of developing BurnSyn (Table 5).

Table 5. Percentage distribution of the possibility of developing burnout syndrome and its relationship with workplace characteristics

Work characteristics	Before Hurricane Irma & Maria						P- value	After Hurricane Irma & Maria						P-value
	Low		Medium		High			Low		Medium		High		
	n	%	n	%	n	%		n	%	n	%	n	%	
<i>Work region</i>														
Arecibo	4	4.9	2	3.7	1	3.7	.128	3	4.3	4	6.7	0	0.0	.019
San Juan	15	18.3	4	7.4	8	29.6		14	20.3	4	6.7	9	26.5	
Bayamon	48	58.5	31	57.4	14	51.9		33	47.8	41	68.3	19	55.9	
Mayaguez	8	9.8	13	24.1	4	14.8		10	14.5	9	15.0	6	17.6	
Island wide	7	8.5	4	7.4	0	0.0		9	13.0	2	3.3	0	0.0	
<i>Position</i>														
Lineman	15	18.3	12	22.2	3	11.1	.190	13	18.8	9	15.0	8	23.5	.045
Office clerk	12	14.6	9	16.7	7	25.9		10	14.5	7	11.7	11	32.4	
Supervisor	15	18.3	8	14.8	3	11.1		14	20.3	9	15.0	3	8.8	
General electric lines worker	19	23.2	6	11.1	3	11.1		12	17.4	13	21.7	3	8.8	
Tree trimmer	7	8.5	8	14.8	3	11.1		4	5.8	10	16.7	4	11.8	
Engineer	2	2.4	3	5.6	4	14.8		3	4.3	5	8.3	0	0.0	
Operator	6	7.3	3	5.6	0	0.0		6	8.7	2	3.3	1	2.9	
Mechanic	2	2.4	4	7.4	1	3.7		2	2.9	5	8.3	0	0.0	
Other	4	4.9	1	1.9	3	11.1		5	7.2	0	0.0	3	8.8	
<i>Time employed</i>														
Less than 10 years	8	9.8	8	14.8	5	18.5	.583	1	1.4	13	21.7	7	20.6	.017
10 to 15 year	19	23.2	17	31.5	4	14.8		19	27.5	15	25.0	6	17.6	
16 to 24 years	41	50.0	22	40.7	13	48.1		35	50.7	24	40.0	17	50.0	
25 years or more	14	17.1	7	13.0	4	14.8		14	20.3	8	13.3	4	11.8	
<i>Self-perceived stress level in workplace</i>														
Not stressful	27	32.9	5	9.3	2	7.4	.003	8	11.6	5	8.3	0	0.0	.001
Slightly stressful	26	31.7	21	38.9	8	29.6		16	23.2	5	8.3	1	2.9	
Moderately stressful	17	20.7	15	27.8	4	14.8		17	24.6	18	30.0	4	11.8	
Highly stressful	10	12.2	10	18.5	10	37.0		19	27.5	21	35.0	15	44.1	
Extremely stressful	2	2.4	3	5.6	3	11.1		9	13.0	11	18.3	14	41.2	

Table 6 shows strategies for stress coping that were used by respondents. Engaging in physical activity was reported as being the most used strategy by the participants employees after Hurricanes Irma and Maria (47.1%); it was followed by practicing religion (23.5%) and meditating (15.8%).

Table 6. Percentage distribution of strategies coping with stress used by PREPA employees after Hurricanes Irma & Maria.

Coping Strategy	n	%
Meditating	25	15.8
Practicing Yoga	6	3.8
Expressing him- or herself artiscally	8	5.1
Playing a musical instrument	19	5.9
Practicing religion	54	23.5
Engaging in physical activity	93	47.1

Discussion

The passing of Hurricane Irma devastated the municipalities of Culebra and Vieques, and left other municipalities as disaster zones; more than a million of people were without electricity, thousand were without water, and 1 person died (25,26). Two weeks later, Hurricane Maria made direct landfall on Puerto Rico and left in its wake total devastation and an island under a state of emergency (27). The catastrophic storm crossed the island, leaving shortages of food, little access to potable water, and lack of fuel, ripping off roofs, and destroying wooden houses; knocking down telecommunication towers, and weather stations; and causing extreme severe landslides (27). One hundred percent of the inhabitants were without electric service, which would take as long as 18 months to re-establish depending on the region (28). In addition, extreme damage to bridges and, dams and entire communities being flooded were reported (29). The storm also wreaked havoc on critical infrastructure, including hospitals, health facilities, and an already strain health care system (30,31). Maria's devastation caused as much as \$102 billion in damages, affecting the island's economy, which was already billions of dollars in debt (31,32).

Research studies have shown that major catastrophic incidents or events contribute to increased stress levels in the workplace, as well as decreases in the quality and productivity of professional performance, both at the individual and the organizational levels (21,33). In addition, they affect the health and psychological well-being of workers (34), a fact that has been proven in different occupational samples and in various professional groups (21).

PREPA is one of the public sector agencies that actively worked after Hurricanes Irma and Maria, both in the response phase, and in the reconstruction and recovery of the electric system, which is an essential service. Ninety-eight percent (98.8%) of the participants in this study reported having worked from June 2017 through June 2018. These participants

reported facing major internal challenges, including the lack of human and economic resources, the lack of continuity, and the lack of the development of long-term preparedness plans, all due, presumably, to government transitions and changes in specific functions occurring as consequences of the disaster (33).

Among all occupational hazards, occupational stress and BurnSyn occupy prominent places, because they contribute to the deterioration of working conditions and increase the risk for accidents and of absenteeism. This situation cannot be ignored by the concerned authorities; it is necessary to raise awareness not only about the importance of this phenomenon, but also about the necessity to design intervention strategies that support this population (35). Exposure to extreme events such as the ones described increases the possibility that an essential-service worker might develop a negative attitude towards him- or herself and/or other people (36).

General health aspects

Health conditions such as hypertension, before hurricanes Irma and Maria, was reported by more than one-third of the participants before Hurricanes Irma and Maria (35.3%). After the events, the number of participants with either, insomnia or depression diagnosis tripled (20.3% and 16.5% respectively) while the number of those with and anxiety diagnosis almost doubled (16.5%). After the hurricanes, participants reported experiencing feelings of frustration (62.7%), sudden mood swings (50.8%), impatience (47.5%) and fatigue (44.1%). Other somatic and/or psychological damages that can trigger the BurnSyn include anxiety, loneliness, impotence, irritation, hostility, lack of tolerance, loss of self-esteem, chronic fatigue, and insomnia, among others (37). Burnout syndrome is a response to perceived stress and has long-term consequences in terms of physical and emotional health of individuals who suffer from it (22). Studies show that the physical and emotional health of people in the essential services sector with BurnSyn are severely affected (38).

Labor conditions

The participants reported that after the hurricanes, their work schedules were affected. Nearly half (49.9%) indicated that they worked 5 to 8 more hours per day, in addition to their normal work schedule, because the organization called them to work. More than one-third of the participants (39.3%) indicated that they worked from 1 to 4 additional hours per day. Situations such as heavy workload and working for long hours in employees working in essential services may increase the prevalence of BurnSyn (39), as it is usually common in workers who spend a lot of time providing services (40). In our comparisons between groups for BurnSyn and psychosomatic syndrome factors, variables such as sex, seniority, income level, and time off during the week were found not to have significant impacts on psychosomatic manifestations, which may suggest that working conditions would seem to be a precursor of stress (41).

Perceived stress

More than half of the participants (54.4%) perceived their stress level to be not / slightly before the hurricanes, and 54.6% reported perceiving their stress to be high/extremely high after the hurricanes. Burnout syndrome is directly related to workplace stress (42), and should be understood to be a response to same. Long-term stress can negatively affect not only the physical and emotional health of the individual, but also the organizational environment where these stressed individuals belong (22).

Burnout syndrome

Burnout syndrome was assessed before and after Hurricanes Irma and Maria. Our results showed that before the hurricanes 50.3% of the participants had a low possibility of developing BurnSyn. Subsequent to the hurricanes, however, the possibility of developing a medium level of BurnSyn increased, going from a pre-storms level of 33.1% to an after-storms level of 36.8%; the possibility of developing a high level of BurnSyn changed as well, increasing from the pre-storms level of 16.6% up to the after-storms level of 20.9%.

Self-perceived stress level ($P = .003$) before the hurricanes showed significant statistical association with BurnSyn. After the hurricanes, other factors, such as where a given worker was stationed ($P = .019$), that individual's position ($P = .045$) and length of time that he or she had been employed (by PREPA) ($P = .017$), and his or her self-perceived stress level in the workplace ($P = .001$) showed significant statistical associations with BurnSyn. People working during a long term disaster and its sequelae are exposed to high levels of stress due to the consequences brought by the event (such as intense workloads, risk environments, witnessing human suffering, risk of personal harm, life-and-death decisions, and separation from family). High levels of stress can trigger mental health problems in the worker, such as BurnSyn in a worker (2). Despite the fact that BurnSyn had been a major concern in disaster research, studies had focused only on humanitarian workers, public health workers, local health care workers, rehabilitation workers, and disaster reconstruction workers (2). This information is consistent with that found in the literature, which information demonstrates that consequences of BurnSyn affect individual's health, which also affects organizations in the form absenteeism, turnover, decreased productivity, and decreases in the quality of work (7, 43). The physical and emotional responses associated with BurnSyn occur when the demands of the job are not in balance with the worker's capabilities, resources and/or needs (44-46).

Strategies for stress coping

Information about coping strategies to deal with stress was also collected. Engaging in physical activity (47.1%) was the most commonly reported strategy, followed by practicing religion (23.5%) and meditating (15.8%). Coping is a cognitive and behavioral effort aimed to reduce, manage, and tolerate

external and internal demands that generate stress (46). Research, points out that occupational stressors promote the development of coping strategies that might be effective in managing stress responses (5), but they must also be effective in eliminating stressors, since subjects must deal with it daily sources of stress (47).

Study limitations

Some limitations should be considered when interpreting the results of our study. First, the study considered a non-probabilistic convenience sample; this means that our study does not reflect the experience of the whole PREPA community, and may suffer from non-response bias if the participants who consented to take part in the study differed from those who did not, a situation that could result in a sample that is not representative of the population. We must make clear we could not reach workers from the areas where Hurricane Maria made landfall because, at the moment of the study, 9 months after the 2 hurricanes, public servants were working with the restoration of the electrical system. Second, our study relied on self-report assessments, which are affected by memory recall, and we had no other tools to confirm the participants' information. Third, the study used a cross-sectional design and we cannot determine causality.

However, our findings contribute to highlighting the importance of both training workers to have a family plan, and to manage high levels of stress during emergency situations and the importance of providing mental and emotional health services for these workers during disaster events.

Recommendations

Officials must advocate for public health policies that promote health quality in essential workers before and after a major disaster. Effective well-being and stress-prevention plans need to be developed. These should include interventions that take place before, during, and after an emergency and that take into account personal workload and emergency plans, provide psychological assessments, and are oriented toward finding evidence-based solutions to any mental health issues as might arise. All the PREPA employees should take part in analyzing and should such be necessary updating the emergency plan. Emergency drills should take place at least 3 times a year and safety equipment provided. A study using probability sampling should be developed; ideally, the sample population would consist of PREPA employees from around the island and would be representative of the wide diversity of the agency's workers.

Resumen

Objetivos: Examinar los niveles de agotamiento y estrés auto-percibido entre los trabajadores de la Autoridad de Energía Eléctrica de Puerto Rico, que experimentaron grandes desastres: los huracanes Irma y María. Métodos: El estudio se trabajó desde

un enfoque cuantitativo con un diseño descriptivo transversal correlacional, en una muestra no probabilística por conveniencia entre trabajadores activos de la Autoridad de Energía Eléctrica de Puerto Rico. Se administró un cuestionario estructurado a una muestra de 163 participantes elegibles, de 21 años o más, que participaron voluntariamente. El estudio examinó las relaciones entre el Síndrome de Quemazón, con características individuales, años de servicio laboral, condiciones de salud y estrategias de afrontamiento, antes y después de los huracanes Irma y María. El Síndrome de Quemazón se evaluó con el Cuestionario para la Evaluación del Síndrome de Quemarse por el Trabajo de Gil-Monte y el estrés auto-percibido se evaluó con la Escala de Estrés percibido, de 14 ítems. Resultados: Antes de los huracanes, el 16.6% de los trabajadores reportaron un alto nivel de síndrome de agotamiento, mientras que después de los huracanes aumentó a un quinto (20.9%). Más de un cuarto (23.4%) de la muestra informó que el estrés auto-percibido antes de los huracanes fue extremo, mientras que después de los huracanes el 55.0% reportó un estrés extremo. Factores como años de servicio de empleo, asesoramiento, estrés auto-percibido mostraron asociaciones estadísticas significativas ($p < 0.05$) con el Síndrome de Quemazón. Conclusión: Se debe dar prioridad a la salud pública a esta población para evitar el agotamiento de los trabajadores y otros efectos sobre la salud debido al largo tiempo en los procesos de respuesta, recuperación y reconstrucción después de estos grandes desastres.

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