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Stress and burnout in nursing home and égida workers during COVID-19

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Abstract

Aims: Finding out whether there are differences in the levels of stress and burnout between workers providing care to dependent adults and those caring for independent older adults would provide comparative information about two different models of care. During the COVID-19 pandemic, workers caring for older adults were subjected to maladaptive situations that produced stress and burnout.

Design: A cross-sectional survey design using the STROBE checklist.

Methods: A total of 900 nursing home and égidas workers were assessed for stress and burnout. Data were collected online from October 2020 to February 2021, when Puerto Rico was experiencing the peak of the third wave of COVID-19. MANOVAs were performed to study the interactions between the workplace and having had COVID, the workplace and the size of institution and the workplace and position held.

Data Sources: October 2020 to February 2021.

Results: All interactions were significant. Nursing homes showed higher levels of stress and burnout when workers had undergone COVID, when the size of the institution was larger and for technical staff other services; in égidas, having undergone COVID did not influence stress or burnout, which increased when the institution was smaller and for executive staff.

Conclusions: This study showed that the effects of the COVID-19 pandemic affected nursing home workers more significantly than those working in other types of residential models with independent older adults.

Implications for the Profession and/or Patient Care: Applying preventive interventions aimed at reducing stress and burnout would facilitate the adaptation of workers caring for older adults and help to improve the quality of care.

Impact: This study analysed the impact of COVID-19 on the stress and burnout of workers providing services to older adults. Nursing home workers who have had COVID-19 have higher stress and burnout. The size of the institution has a different effect depending on whether older adults are dependent or independent. Workers in institutions dedicated to the care of the older adults.

Reporting Method: This study has adhered to the relevant EQUATOR guidelines: STROBE.

Patient or Public Contribution: During the different waves of the COVID-19 pandemic, it was difficult to establish direct contact with workers providing care to older adults; this reason made it necessary to apply online systems to obtain information. The workers appreciated the fact that the implications for stress and burnout of the situation experienced during this difficult process were investigated.

KEYWORDS
burnout, COVID-19, égidas, nursing, nursing home, Puerto Rico, stress

1 | INTRODUCTION

Puerto Rico is an archipelago in the Caribbean and an unincorporated territory of the United States whose residents have full US citizenship. Although Puerto Rico is a commonwealth with autonomy over local matters, the US government imposes significant restrictions on the way Puerto Rico manages governmental affairs, including public health (García et al., 2021). The inequitable response of the US federal government increases adverse outcomes that significantly affect the lives and well-being of Puerto Ricans (Garriga-López, 2020), which worsened with the COVID-19 pandemic.

The proportion of older adults in Puerto Rico caught up with the percentage in the United States relatively recently, in 2010. However, according to the U.S. Census Bureau (2020), Puerto Rico currently has a higher proportion of adults aged 65 and older than the continental United States (21% vs. 16.5%). The recent rapid growth in the older adult population in Puerto Rico may place strains on the social and health systems on the island (Pérez & Ailshire, 2017). Ageing populations have higher rates of morbidity and disability, and these conditions must be dealt with by professionals working in institutions that provide health care and support to older adults.

Puerto Rico differentiates between two types of institutions that offer direct care services to older adults: nursing homes and égidas. Nursing homes provide a wide range of health and personal care services, focusing mainly on care, given the dependent status of their users. Égidas, in which independent older adults reside, are institutions that offer different levels of care in one place, providing individual flats or condominiums in buildings for people who can manage their daily activities but do not have the resources to purchase housing.

Although workers in both types of institutions have similar professional categories, the type of resident they deal with is quite different. Knowing the differences between the two types of institutions, where the users differ mainly in their degree of dependency, offers us the opportunity to analyse whether there are differences in the way the COVID-19 pandemic affected perceived stress and burnout in the caregiving staff of these institutions, and this information could be relevant for psychological interventions in égidas and nursing homes.

1.1 | Background

During the COVID-19 pandemic, the United States documented high numbers of positive cases and deaths in care homes for older adults (McMichael et al., 2020; Unruh et al., 2020). Staff in care homes for older adults had to cope and struggle with frequent deaths, increased risk of their own and residents' positive cases, and fluctuating regulations and care standards, while maintaining a sense of normalcy for the residents as they were isolated from loved ones (Beynon et al., 2020). Residents and healthcare personnel at long-term care facilities were at risk of COVID-19 transmission and severe outcomes, especially for residents who predominantly had advanced ages and underlying medical conditions (McMichael et al., 2020). This situation directly affected the physical and mental health of the care home staff, specifically increasing stress and burnout.

One of the most popular models to describe stress was proposed by Lazarus and Folkman (1984). The model emphasizes the person–environment transaction and suggests that, once confronted with stressors, the individual evaluates the relevance of the stressors (primary evaluation) and their own resources to overcome the stress (secondary evaluation).

Zhao et al. (2021) showed that many care home staff experienced COVID-19-related stress and unexpectedly high workloads. Beattie et al. (2023) reported that the main stressors were the changes in the environment that were necessary to reduce the transmission of COVID-19, creating a clinical environment as opposed to a homely one, restricting visiting for the relatives of residents, and having to navigate rapidly changing guidelines and conditions to make important decisions about care delivery. The review by Gray et al. (2022) reports that there was consistency in the themes found in the qualitative and quantitative findings. Levels of distress increased in care homes during the pandemic and added to the topics noted above the fear of the consequences of contracting the virus for themselves, their families and the residents.

Although stress is normal in a range of circumstances (Smith & Fawcett, 2006), the negative consequences arising from workload factors associated with stress can lead to emotional exhaustion or burnout. Stress is not an isolated outcome of the transaction between stimuli and responses, and the concept of professional burnout is closely related to it (Watson et al., 2008). Burnout leads to

emotional exhaustion and a tendency to depersonalize those being cared for; it also reduces the sense of achievement. According to Cox et al. (1993), the transactional model of stress is closely related to burnout and maps on to several aspects of occupational stress.

The research by Navarro Prados et al. (2022) points out that in care homes, there is a greater probability of burnout occurring because care homes are environments with high demand and scarce resources. In addition, they involve daily exposure to situations of emotional overload, such as being emotionally involved with the users, who in many cases have an illness that has no solution because it is chronic or degenerative. This situation can produce feelings of helplessness and suffering in the worker. Blanco-Donoso et al. (2021) reported high levels of workload, social pressure, contact with death and suffering, and secondary traumatic stress among nursing home workers during the pandemic. These levels are even higher than those obtained by samples of professionals who are in frequent contact with victims, such as emergency health care, civil protection, and firefighters (Meda et al., 2012). Kandelman et al. (2017) reported that, during the pandemic, caregivers in care homes experienced a significant increase in burnout levels. Barello et al. (2020) also noted the enormous psychological and physical impact of the COVID-19 emergency outbreak on Italian healthcare workers, finding that levels of emotional exhaustion appeared to be higher than normative values.

Workers in care homes for older adults showed high levels of burden and stress, demonstrating the impact that COVID-19 has on occupational psychosocial factors. This research aimed to analyse how the independent variable of the workplace (nursing home and égida) and its interaction with: (a) having had COVID-19; (b) the number of residents; (c) job position held, affected the dependent variables: perceived stress and burnout dimensions.

2 | METHOD

2.1 | Design

This cross-sectional study involved an anonymous online survey and was conducted according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist. Data were collected between October 2020 and February 2021.

2.2 | Participants and sample

This study considered professionals from institutions for older adults on the island of Puerto Rico who work in nursing homes or égidas and were or had been active during the COVID-19 pandemic.

The sample initially consisted of 923 participants, but 23 were removed, representing 2.49% of the total. Finally, 900 participants aged 20–66 years ($M = 44.8$; $SD = 8.5$) were included, of whom 62.6% were women. In relation to marital status, 54.3% were married, 21.9% single, 21.9% divorced and 1.9% widowed. The distribution according to academic levels was as follows: 35% high school, 33.3% vocational training, 17.3% university degree and 14.4% university master's degree.

In relation to the employment characteristics of the participants, 50.1% were employed in égidas and 49.9% in nursing homes. Table 1 shows the characteristics of the workers in both types of institutions.

TABLE 1 Characteristics of staff in égidas and nursing homes.

	Égidas	Nursing home
Number of users		
<50	29.3%	32.3%
51–100	61%	39.4%
>100	9.7%	28.3%
Position held		
Executive staff	12%	14%
Technical staff	31%	17.6%
Direct care staff	40.4%	34.5%
Other services	16.6%	33.9%
Years worked		
<5	23.5%	26.3%
5–10	52.1%	46.3%
>10	24.4%	27.4%
Having had COVID-19		
Yes	46.6%	45%
No	59.1%	55%

Note: Executive staff: director, manager or coordinator; Technical staff: doctor, nurse, psychologist, occupational therapist, respiratory therapist; Direct care staff: nursing assistant and carers; Other services: kitchen, maintenance, cleaning, laundry or reception.

2.3 | Data collection

The study was conducted from October 2020 to February 2021, when the third wave of COVID-19 on the island was at its peak. The protocol was configured using an online system (LimeSurvey) that lasted between 25 and 35 min. It was disseminated by non-probabilistic snowball sampling to people in the network of contacts of nursing homes and égidas of the Office of Epidemiology and Research of the Puerto Rico Department of Health, and these participants were asked to forward the invitation to the institution's contacts.

At the beginning of the protocol, it was necessary to confirm the informed consent where the objectives, method, approximate time and data storage system were indicated. Once they had given their consent, participants were taken to a new page that displayed the questions related to socio-demographic variables. The following pages presented, independently, each of the instruments selected for the evaluation. At all times, a progress bar appeared at the top of the page indicating the percentage completed. Participants could

navigate backwards and were required to answer all the items on the questionnaires; in cases of non-completion, the answers were not saved. In addition, in order to find out whether respondents answered the items randomly, four attention control questions were included in the questionnaires; an example is "If you are reading this, tick option 1 = strongly disagree". Respondents who made two or more errors on these four items were eliminated due to the possibility that they were answering randomly; 23 participants were eliminated.

2.4 | Ethical considerations

This study was conducted based on universal ethical principles (e.g., Declaration of Helsinki) for research in humans. This study was also approved by the ethics committee of the University of Salamanca. All respondents indicated that they agreed to the informed consent by ticking a box before starting the online survey. This acknowledgement included the study aims and methods, the approximate time needed to complete the survey and information about data storage. Completion of the questionnaire was interpreted as consent to participate in the research.

2.5 | Instruments

The Perceived Stress Scale (PSS; Cohen et al., 1983) aims to measure the degree to which situations in one's life are considered stressful based on the transactional model of Lazarus and Folkman (1987); the Spanish version adapted by Remor (2006) was used. The scale assesses the degree to which life is perceived as unpredictable, uncontrollable or generating overload during the past month. The self-report scale consists of 14 items with a five-point response scale (0 = never, 1 = almost never, 2 = occasionally, 3 = often, 4 = very often). This scale has shown good internal consistency, concurrent validity and sensitivity (Remor, 2006), obtaining an alpha of .91 in this research.

The Maslach Burnout Inventory (MBI; Maslach et al., 1996) is possibly the most frequently used instrument for the assessment of burnout. Among the various versions of the scale, the MBI-Human Services Survey (MBI-HSS) is aimed at health professionals and based on the classic version of the MBI (Maslach & Jackson, 1986). The scale is a 22-item questionnaire with responses given on a 7-choice Likert scale indicating the frequency with which certain work-related feelings are experienced, with a possible score ranging from 0 to 6 for each item. There are multiple validations and adaptations to Spanish; in this case, we used the one proposed by Gil-Monte (2002).

The scale differentiates three dimensions: Emotional Exhaustion (EE) reflects the feeling of being emotionally exhausted because of work, with less capacity to give to others, and not being able to give more of oneself emotionally and affectively; Depersonalization (DP) implies an impersonal and cold response to the people cared for, with the development of negative feelings and attitudes towards the recipients of the work; and Personal Achievement (PA) expresses feelings of competence and success, and, in contrast to the previous two components, low values are indicative of burnout syndrome. Regarding the internal consistency assessed by Cronbach's alpha, several papers show an excellent estimate of the reliability of the instrument, which supports its use as a reliable instrument to assess burnout (Schutte et al., 2000). In this study, the alpha obtained was 0.92 for the emotional exhaustion dimension, 0.79 for depersonalization and 0.86 for personal accomplishment.

2.6 | Data analysis

Three multivariate analyses of variance (MANOVA) were conducted to investigate the potential main and interaction effects of independent variables on the dependent variables: perceived stress and the three dimensions of burnout (emotional exhaustion, depersonalization and personal achievement). A significance level of 5% was adopted, and Wilks' lambda was utilized to assess differences among the levels of independent variables in combination with dependent variables.

The first MANOVA (2 × 2) examined the independent variables of workplace (nursing home and égida) and COVID-19 exposure (yes or no). The second MANOVA (2 × 3) analysed the independent variables of workplace (nursing home and égida) and size of residence (small, medium or large). The last MANOVA (2 × 4) investigated the independent variables of workplace (nursing home and égida) and job position held.

MANOVAs with statistically significant interactions were further examined using univariate simple effects analyses and post-hoc tests (Tukey's HSD) to identify differences between groups. Statistical analyses were performed using SPSS 21.

3 | RESULTS

3.1 | Analysis of differences in stress and burnout as a function of workplace and having had COVID-19

The multivariate contrasts indicate that there were main effects of the variables workplace ($\Lambda = 0.971$, $F_{4, 893} = 6.77$; $p < .001$; $\eta^2 = 0.029$), having had COVID-19 ($\Lambda = 0.937$, $F_{4, 893} = 14.95$; $p < .001$; $\eta^2 = 0.063$), and their interaction ($\Lambda = 0.965$, $F_{4, 893} = 7.97$; $p < .001$; $\eta^2 = 0.035$).

Table 2 below presents the results of follow-up ANOVAs for the effects of the workplace, having had COVID-19 and their interaction.

As for the workplace variable, Tukey's post hoc test was applied to determine whether they differed from each other, showing that there were significant differences in all three dimensions of burnout ($p < .001$), with the nursing home mean being higher on emotional exhaustion and depersonalization and lower on personal achievement. However, no differences were obtained in perceived stress between the nursing home and égida workers. In the case of having

TABLE 2 ANOVA results for perceived stress and burnout dimensions by workplace and COVID-19 exposure: Main effects and interactions.

	Workplace			Having had COVID-19			Interaction		
	$F_{(1, 896)}$	p	η^2	$F_{(1, 896)}$	p	η^2	$F_{(1, 896)}$	p	η^2
PS	1.67	.196	0.002	43.38	<.001	0.046	15.27	<.001	0.017
BEE	24.47	<.001	0.027	44.33	<.001	0.047	27.54	<.001	0.030
BDP	22.48	<.001	0.024	41.15	<.001	0.044	26.95	<.001	0.029
BPA	21.68	<.001	0.024	25.67	<.001	0.028	15.38	<.001	0.017

Abbreviations: BDP, burnout: depersonalization; BEE, burnout: Emotional exhaustion; BPA, burnout: personal achievement; PS, perceived stress.

TABLE 3 Means and standard deviations of the interactions between workplace and having had the illness, and simple effects tests for the analysis of these interactions.

	Workplace	COVID	Mean (*SD*)	*F*	*g.l.*	*p*	η^2
Perceived stress	Égida	Yes	2.12 (0.15)	3.57	1, 896	.059	0.004
		No	2.09 (0.14)				
	Nursing home	Yes	2.18 (0.19)	55.59	1, 896	<.001	0.058
		No	2.06 (0.17)				
Burnout: emotional exhaustion	Égida	Yes	2.84 (0.49)	0.98	1, 896	.332	0.001
		No	2.77 (0.47)				
	Nursing home	Yes	3.29 (0.97)	71.66	1, 896	<.001	0.074
		No	2.76 (0.62)				
Burnout: depersonalization	Égida	Yes	2.86 (0.86)	0.74	1, 896	.390	0.001
		No	2.81 (0.80)				
	Nursing home	Yes	3.32 (0.98)	68.11	1, 896	<.001	0.071
		No	2.78 (0.64)				
Burnout: personal achievement	Égida	Yes	3.12 (0.39)	0.64	1, 896	.421	0.001
		No	3.16 (0.41)				
	Nursing home	Yes	2.81 (0.74)	4.84	1, 896	<.001	0.044
		No	3.13 (0.51)				

had COVID-19, differences were obtained in the four dependent variables ($p < .001$), with the participants who had had the illness obtaining higher scores on perceived stress and on the dimensions of emotional exhaustion and depersonalization and lower scores on burnout and personal achievement. Finally, with regard to the interaction, Table 3 shows the means and standard deviations of the variables studied, with significant differences obtained in all of them.

Table 3 shows that whereas workers in the égida did not differ on the dependent variables depending on whether they had had COVID-19, workers in the nursing homes who had had the disease had significantly higher perceived stress, emotional exhaustion and depersonalization and lower personal achievement.

3.2 | Analysis of differences in stress and burnout as a function of workplace and number of residents

The multivariate contrasts indicate that there were main effects of the variables workplace ($\Lambda = 0.958$, $F_{4, 891} = 9.74$; $p < .001$; $\eta^2 = 0.042$), number of residents in the institution ($\Lambda = 0.946$, $F_{8, 1782} = 6.29$; $p < .001$; $\eta^2 = 0.027$) and their interaction ($\Lambda = 0.923$, $F_{8, 1782} = 9.09$; $p < .001$; $\eta^2 = 0.039$).

Table 4 below presents the results of follow-up ANOVAs for the effects of the workplace, the number of residents and their interaction.

Tukey's post hoc test applied to study differences depending on the workplace obtained significant results for the four dependent variables, with the mean for perceived stress being higher for nursing home workers ($p = .007$), as well as the burnout dimensions emotional exhaustion and burnout depersonalization ($p < .001$), whereas in the personal achievement dimension, the mean was higher for égida workers ($p < .001$). Regarding the number of residents in the institution where they work, perceived stress did not show significant differences. However, in the dimensions of burnout emotional exhaustion and burnout depersonalization, institutions with more than 100 residents had significantly higher scores ($p < .001$), with lower scores on burnout personal achievement ($p < .001$). Finally, with regard to the interaction, Table 5 shows

TABLE 4 ANOVA results for perceived stress and burnout dimensions by workplace and number of residents: Main effects and interactions.

	Workplace			Number of residents			Interaction		
	$F_{(1, 984)}$	p	η^2	$F_{(1, 984)}$	p	η^2	$F_{(2, 894)}$	p	η^2
PS	7.24	.007	0.008	1.23	.291	0.003	11.04	<.001	0.024
BEE	33.27	<.001	0.036	8.95	<.001	0.020	28.72	<.001	0.060
BDP	30.41	<.001	0.033	9.17	<.001	0.020	23.92	<.001	0.051
BPA	37.40	<.001	0.040	9.88	<.001	0.022	33.84	<.001	0.070

Abbreviations: BDP, burnout: depersonalization; BEE, burnout: Emotional exhaustion; BPA, burnout: personal achievement; PS, perceived stress.

TABLE 5 Means and standard deviations of the interactions between workplace and number of residents, and simple effects tests for the analysis of these interactions.

	Workplace	Size	Mean (*SD*)	*F*	*g.l.*	*p*	η^2
Perceived stress	Égida	≤50	2.12 (0.16)	6.65	2, 894	.001	0.014
		51–100	2.11 (0.14)				
		>100	2.02 (0.13)				
	Nursing home	≤50	2.11 (0.21)	4.93	2, 894	.007	0.011
		51–100	2.09 (0.14)				
		>100	2.15 (0.23)				
Burnout: emotional exhaustion	Égida	≤50	2.80 (0.53)	2.06	2, 894	.127	0.005
		51–100	2.83 (0.48)				
		>100	2.61 (0.30)				
	Nursing home	≤50	2.85 (0.56)	55.89	2, 894	<.001	0.111
		51–100	2.75 (0.47)				
		>100	3.51 (1.22)				
Burnout: depersonalization	Égida	≤50	2.76 (0.50)	2.77	2, 894	.063	0.006
		51–100	2.88 (0.53)				
		>100	2.68 (0.33)				
	Nursing home	≤50	2.85 (0.55)	49.13	2, 894	<.001	0.099
		51–100	2.81 (0.50)				
		>100	3.52 (1.24)				
Burnout: personal achievement	Égida	≤50	3.19 (0.43)	4.35	2, 894	.013	0.010
		51–100	3.09 (0.42)				
		>100	3.31 (0.21)				
	Nursing home	≤50	3.14 (0.43)	63.33	2, 894	<.001	0.124
		51–100	3.17 (0.39)				
		>100	2.56 (0.91)				

the means and standard deviations of the variables studied, with significant differences obtained in the four dependent variables studied.

Table 5 shows that significant differences were obtained in all the variables in the case of the nursing homes, whereas in the case of the égidas, only perceived stress and burnout personal achievement were significant. Égidas with a number of residents >100 had significantly less perceived stress than those with a smaller size (51–100, $p = .003$; ≤50, $p = .001$). In nursing homes, the opposite effect was observed; in institutions with a larger number of residents, there was higher perceived stress than in smaller ones (51–100, $p = .007$; ≤50, $p = .050$). Emotional exhaustion burnout and depersonalization burnout in homes with more residents showed a significantly higher score than in those with fewer residents (51–100, $p < .001$; ≤50, $p < .001$). In the personal achievement burnout dimension, the opposite trend was observed, given that it was significantly lower in homes with >100 residents than in those with fewer (51–100, $p < .001$; ≤50, $p < .001$). Finally, in the case of égidas, personal achievement was higher in larger institutions than in those with 51–100 residents ($p = .026$).

3.3 | Analysis of differences in stress and burnout as a function of workplace and position held

The multivariate contrasts indicate that there were main effects of the variable's workplace ($\Lambda = 0.983$, $F_{4,\ 889} = 3.86$; $p = .004$; $\eta^2 = 0.017$), job position held ($\Lambda = 0.938$, $F_{12,\ 2.52} = 4.81$; $p < .001$; $\eta^2 = 0.021$) and their interaction ($\Lambda = 0.965$, $F_{12,\ 2352} = 2.62$; $p = .002$; $\eta^2 = 0.012$).

Table 6 presents the results of follow-up ANOVAs for the effects of the workplace, job position held and their interaction.

Regarding the workplace, Tukey's post hoc test was applied to determine whether there were differences between nursing home and égida workers. No significant differences were found in perceived stress. However, significantly higher scores were obtained in the nursing home for emotional exhaustion ($p = .001$), depersonalization ($p < .001$), and significantly lower scores were found for personal achievement ($p = .002$). In the analysis of the four professional categories, a comparison was made to examine the differences. Results indicated that technical staff exhibited significantly higher levels of stress compared to direct care staff ($p = .023$). However, direct care staff reported significantly lower levels of emotional exhaustion ($p < .001$) and depersonalization ($p < .001$) in comparison to both technical staff and other services. Furthermore, direct care staff had the highest level of personal achievement ($p < .001$) compared to all professional groups, including executive staff, technical staff and other services.

Table 7 demonstrates significant differences in all the variables studied, both in nursing homes and in égidas.

Specifically, in égidas, the executive staff reported significantly higher levels of perceived stress compared to workers in other services ($p = .027$). Furthermore, direct care staff exhibited significantly lower levels of emotional exhaustion and depersonalization in comparison to executive staff ($p = .022$; $p = .006$) and technical staff ($p = .024$; $p = .003$), while personal achievement scores were significantly higher than those of executive staff ($p = .024$) and technical staff ($p = .003$).

Significant differences were observed among position held in nursing homes. Technical staff had the highest scores on perceived stress, demonstrating significant differences compared to direct care staff ($p = .018$). Regarding burnout, technical staff scored significantly higher on emotional exhaustion and depersonalization compared to executive staff ($p = .001$; $p = .001$) and direct care staff ($p < .001$; $p < .001$). Similarly, workers in other services scored significantly higher on emotional exhaustion and depersonalization than executive staff ($p < .001$; $p = .003$) and direct care staff ($p < .001$; $p < .001$). Finally, the direct care staff group obtained significantly higher scores in personal achievement than executive staff ($p < .001$) and other services ($p < .001$).

4 | DISCUSSION

This research aimed to study how COVID might affect stress and burnout dimensions in two different models of care for older adults: nursing homes and assisted living facilities. To our knowledge, this is the first study on the island of Puerto Rico to analyse the differences between these models of care for dependent and independent older adults, and it demonstrated the impact of the pandemic mainly in nursing homes. The results showed that having been exposed to COVID had a greater impact on stress and burnout among nursing home workers, but not among égida workers. With regard to the size of the institutions, stress was higher in the smaller égidas, whereas nursing home workers had significantly more stress when there was a larger number of residents, showing higher scores on the burnout dimensions of emotional exhaustion and depersonalization. Finally, stress and burnout levels vary significantly based on the workplace and the job position held. In égidas, executive staff reported significantly higher levels of perceived stress, whereas direct care staff exhibited significantly higher scores on personal achievement. Conversely, in nursing homes, technical staff and workers in other services scored significantly higher on emotional exhaustion and depersonalization.

It is likely that the differences observed in stress levels between the two types of institutions are generated by the more extreme factors in nursing homes compared to care homes, such as the demands of the patients given their greater dependency and the work demands and workload due to the type of residents. Nursing home professionals have daily direct contact with the disease, which in many cases has no solution because it is chronic or degenerative. This can lead to disappointment and feelings of helplessness and generate suffering in workers, ranging from physical health symptoms to psychological exhaustion or depression (Kandelman et al., 2017; Sonnentag & Frese, 2013).

TABLE 6 ANOVA results for perceived stress and burnout dimensions by workplace and position held: Main effects and interactions.

	Workplace			Position held			Interaction		
	$F_{(1, 892)}$	p	η^2	$F_{(1, 892)}$	p	η^2	$F_{(1, 892)}$	p	η^2
PS	0.37	.540	0.001	3.31	.020	0.011	4.42	.004	0.015
BEE	11.34	.001	0.013	12.57	<.001	0.041	6.97	<.001	0.023
BDP	10.09	.002	0.011	13.58	<.001	0.044	5.45	.001	0.018
BPA	14.13	<.001	0.016	14.29	<.001	0.046	3.15	.024	0.011

Abbreviations: BDP, burnout: depersonalization; BEE, burnout: Emotional exhaustion; BPA, burnout: personal achievement; PS, perceived stress.

TABLE 7 Means and standard deviations of the interactions between workplace and position held, and simple effects tests for the analysis of these interactions.

	Workplace	Position held	Mean (*SD*)	*F*	*g.l.*	*p*	η^2
Perceived stress	Égida	Executive staff	2.15 (0.17)	3.05	3, 892	.028	0.010
		Technical staff	2.11 (0.15)				
		Direct care staff	2.09 (0.14)				
		Other services	2.07 (0.14)				
	Nursing home	Executive staff	2.09 (0.22)	4.01	3, 892	.008	0.013
		Technical staff	2.15 (0.18)				
		Direct care staff	2.08 (0.16)				
		Other services	2.13 (0.20)				
Burnout: emotional exhaustion	Égida	Executive staff	2.98 (0.68)	4.37	3, 892	.005	0.014
		Technical staff	2.89 (0.48)				
		Direct care staff	2.68 (0.35)				
		Other services	2.76 (0.50)				
	Nursing home	Executive staff	2.79 (0.58)	16.23	3, 892	<.001	0.052
		Technical staff	3.21 (0.11)				
		Direct care staff	2.76 (0.61)				
		Other services	3.21 (0.92)				
Burnout: depersonalization	Égida	Executive staff	3.03 (0.76)	6.01	3, 892	<.001	0.020
		Technical staff	2.95 (0.47)				
		Direct care staff	2.68 (0.37)				
		Other services	2.80 (0.52)				
	Nursing home	Executive staff	2.83 (0.70)	13.35	3, 892	<.001	0.043
		Technical staff	3.27 (1.1)				
		Direct care staff	2.81 (0.64)				
		Other services	3.19 (0.91)				
Burnout: personal achievement	Égida	Executive staff	3.01 (0.53)	5.31	3, 892	.001	0.018
		Technical staff	3.04 (0.38)				
		Direct care staff	3.25 (0.30)				
		Other services	3.16 (0.50)				
	Nursing home	Executive staff	3.01 (0.56)	12.61	3, 892	<.001	0.041
		Technical staff	2.82 (0.80)				
		Direct care staff	3.18 (0.46)				
		Other services	2.85 (0.70)				

The results indicate that institutions with dependent residents showed significantly higher levels of burnout when the workers had had COVID-19, whereas there were no differences in those with independent older adults (égidas). White et al. (2019) reported that the pandemic added significant strain to an already vulnerable nursing home workforce that has historically experienced high levels of turnover, chronic staff shortages and high burnout. In addition, White et al. (2021), analysing qualitative data from a sample of healthcare professionals working in nursing homes and other long-term care settings, indicated that respondents reported experiencing burnout and described the physical, mental and emotional burden of taking on heavier caseloads and learning new roles and processes or even performing tasks that are not part of their job. Cai et al. (2020) found that an excessive workload, inadequate personal protective equipment, uncertainty about their safety and that of their families and concern about patient mortality are factors that can trigger psychological distress during this critical and novel situation.

With regard to size, the review by Konetzka et al. (2021) found that the most important and consistent predictors of COVID-19 cases and deaths were the prevalence of COVID-19 in the community and the larger size of the facility, which was related to the number of people entering and leaving that community, as well as the ease of transmission within a facility. It can be argued that the size of the residence was a relevant variable during the pandemic. The results obtained in Puerto Rico showed two different patterns depending on the place where the care is provided and the size. Whereas in égidas (independent older adults) with fewer residents, the level of stress was higher and there was less personal achievement, in

nursing homes with dependent older adults and a greater number of residents, stress and burnout was significantly higher.

These results may be related to the specific characteristics of these types of institutions, where staff often work with their residents for months or years, getting to know them and their families well. Familiarity can be positive in providing the necessary care, especially in the case of dependent older adults, but it can also lead to an added emotional burden that increases stress, as seems to be the case in larger nursing homes. This causes them to experience significant grief if the user dies, which is not uncommon in nursing homes (Boerner et al., 2017), particularly during the pandemic. Conversely, when older adults are independent, there will be greater disengagement in larger facilities, and stress will be produced when there is more direct and personal contact, as in the case of smaller égidas.

Research with dependent older adults with dementia found that facility size (medium, 80–120 beds) was positively associated with increased caregiver emotional exhaustion compared to smaller facilities (Chamberlain et al., 2017). The results obtained in this study showed that workers in larger nursing homes have significantly more emotional exhaustion and depersonalization and less personal achievement. Hawk et al. (2022) found that the smallest facilities (<50 beds) more often met all the staffing categories. Staffing is important for assessing and ensuring quality of care and patient safety, but it is also important for managing resources effectively and minimizing the effects of burnout. Akinci and Krolikowski's (2005) study confirms that quality of care is negatively affected when staffing levels are reduced. Thus, it is possible that larger size may lead to structural deficiencies that lead to burnout in nursing home workers.

Regardless of the limitations of size and the fact that the community is often the preferred environment for those requiring long-term care, the need for specialized residential care remains. Therefore, establishing working conditions that facilitate the development of the professionals involved should be a priority. Reducing sources of stress and burnout may be one of the keys to improving care for older adults, in addition to providing specialized care in nursing homes. Although in recent decades numerous programmes have attempted to create person-centred care that considers and respects the voices of older adults and those who work with them (Fishman et al., 2016), this is still an evolving movement with little evidence to guide providers in implementing changes with proven impact (Shier et al., 2014).

Among the different professional profiles examined, technical staff and executive staff generally experienced higher levels of emotional exhaustion and depersonalization compared to other professionals. However, direct care staff showed higher levels of personal achievement. These challenges were exacerbated in the nursing homes as professionals had to cope with staff shortages, procedural changes, sick leave and the difficulty of finding health staff to cover for them. Many of them had to perform tasks for which they were not adequately prepared, leading to feelings of inadequate performance and developing negative attitudes towards work. These factors could potentially contribute to increased physical fatigue, cardiovascular disorders, as well as other issues like anxiety, depression, loss of motivation, irritability and sleep disturbances (Giri et al., 2021; White et al., 2021).

Finally, the results highlight the importance of considering workplace factors and occupational categories when studying the dimensions of perceived stress and burnout. The findings indicate that tailored interventions and support strategies may be needed to address the specific challenges faced by different groups of employees. By recognizing these variations, organizations can effectively reduce stress and burnout and improve the overall well-being of their workforce.

4.1 | Limitations

Some limitations of our study should be noted. First, the cross-sectional design precluded examining causal relationships between the work environment and the outcomes. Second, a multilevel analysis in terms of different executive positions was not possible. Additionally, recognizing the potential impact of heterogeneity in positions held on outcomes is essential, and it should be duly considered in future research. Finally, the effect sizes obtained are low, which means we should be cautious in interpreting the results obtained.

5 | CONCLUSION

The comparison of different models of care for older adults, as well as the assessment of various position held, yields relevant information on opportunities for strengthening and weaknesses to address. This study showed that the effects of the COVID-19 pandemic affected nursing home workers more significantly than those working in other types of residential models with independent older adults. Nursing home workers show higher levels of stress and burnout when they themselves have experienced the disease and when they work in larger facilities, which may affect future quality of care. Additionally, technical workers, managers and direct care staff demonstrated different perspectives and experiences that contribute to burnout and stress in nursing homes.

6 | RELEVANCE FOR CLINICAL PRACTICE

There seems to be an urgent need to implement psychosocial prevention interventions to help mitigate the stress and burnout of nursing home workers after having been in continuous contact with a traumatic situation such as the one resulting from the COVID-19 pandemic. It is not sufficient to think about administering an intervention that remedies the exposure to the acute crisis period because post-traumatic stress and emotional problems resulting from the situation are likely to have a high incidence in the future as well. Early interventions, in addition to facilitating adjustment after the crisis period, may help to prevent the development of psychological

disorders later in life. Designing specific interventions tailored to the unique needs of each position held should be a priority.

AUTHOR CONTRIBUTIONS

Ana-Belén Navarro-Prados: Conceptualization; Formal Analysis; Writing—original draft. Yanielis Rodríguez-Ramírez: Conceptualization; Investigation; Data curation; Writing—review & editing; Resources. Encarnacion Satorres: Conceptualization; Formal analysis; Writing—original draft. Juan C. Meléndez: Conceptualization; Formal analysis; Writing—original draft; Writing—review & editing.

CONFLICT OF INTEREST STATEMENT

None declared.

PEER REVIEW

The peer review history for this article is available at https://www.webofscience.com/api/gateway/wos/peer-review/10.1111/jan.15849.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

This study was also approved by the ethics committee of the University of Salamanca (Approval Number: 515/2020). The authors have checked to make sure that their submission conforms to the Journal's statistical guidelines described. The statistics were checked prior to submission by an expert statistician, and the name and email address are as follows: L. Alfonso Pitarque luis.a.pitarque@uv.es

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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