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Original Study

Changes in Health and Well-Being of Nursing Home Managers from a Prepandemic Baseline in February 2020 to December 2021



Carole A. Estabrooks PhD^{a,*}, Yinfei Duan PhD^a, Greta G. Cummings PhD^b,
 Malcolm Doupe PhD^c, Matthias Hoben Dr rer medic^{a,d}, Janice Keefe PhD^e,
 Jeffrey W. Poss PhD^f, Yuting Song PhD^g, Janet E. Squires PhD^h, Adrian Wagg MDⁱ,
 Peter G. Norton MD^j

^a Faculty of Nursing, College of Health Sciences, University of Alberta, Edmonton, Alberta, Canada

^b College of Health Sciences, University of Alberta, Edmonton, Alberta, Canada

^c Max Rady College of Medicine, Community Health Science, University of Manitoba, Winnipeg, Manitoba, Canada

^d School of Health Policy & Management, Faculty of Health, York University, Toronto, Ontario, Canada

^e Department of Family Studies & Gerontology, Mount Saint Vincent University, Halifax, Nova Scotia, Canada

^f School of Public Health Sciences, University of Waterloo, Waterloo, Ontario, Canada

^g School of Nursing, Qingdao University, Qingdao, Shandong, China

^h School of Nursing, Faculty of Health Sciences, University of Ottawa, Ottawa, Ontario, Canada

ⁱ Faculty of Medicine & Dentistry, College of Health Sciences, University of Alberta, Edmonton, Alberta, Canada

^j Department of Family Medicine, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada

A B S T R A C T

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Objective: To evaluate changes in mental health and well-being (eg, quality of work life, health, intention to leave) among nursing home managers from a February 2020 prepandemic baseline to December 2021 in Alberta, Canada.

Design: Repeated cross-sectional survey.

Setting and Participants: A random sample of nursing homes ($n = 35$) in urban areas of Alberta was selected on 3 strata (region, size, ownership). Care managers were invited to participate if they (1) managed a unit, (2) worked there for at least 3 months, and (3) worked at least 6 shifts per month.

Methods: We measured various mental health and well-being outcomes, including job satisfaction (Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale), burnout (Maslach Burnout Inventory—exhaustion, cynicism, efficacy), organizational citizenship behaviors (constructive efforts by individuals to implement changes to improve performance), mental and physical health (Short Form-8 Health Survey), burden of worry, and intention to leave. We use mixed effects regression to examine changes at the survey time points, controlling for staffing and resident acuity.

Results: The final sample included 181 care managers (87 in the pre-COVID survey; 94 in the COVID survey). Response rates were 66.9% and 82.5% for the pre-COVID and COVID surveys, respectively. In the regression analysis, we found statistically significant negative changes in job satisfaction (mean difference -0.26 , 95% CI -0.47 to -0.06 ; $P = .011$), cynicism (mean difference 0.43 , 95% CI 0.02 – 0.84 ; $P = .041$), exhaustion (mean difference 0.84 , 95% CI 0.41 – 1.27 ; $P < .001$), and SF-8 mental health (mean difference -6.49 , 95% CI -9.60 to -3.39 ; $P < .001$).

Conclusions and Implications: Mental health and well-being of nursing home managers worsened during the pandemic, potentially placing them at risk for leaving their jobs and in need of improved support. These findings should be a major concern for policy makers, particularly given serious prepandemic workforce shortages. Ongoing assessment and support of this understudied group are needed.

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* Address correspondence to Carole A. Estabrooks, PhD, Faculty of Nursing, College of Health Sciences, University of Alberta, 5-183, Edmonton Clinic Health Academy, 11405 87 Ave, Edmonton, Alberta, Canada T6G 1C9.

E-mail address: carole.estabrooks@ualberta.ca (C.A. Estabrooks).

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Nursing homes are a critical but overlooked and under-researched sector of the health system. In Canada, approximately 225,000 people live in 2076 residential nursing homes providing 24-hour residence and health services.¹ An additional 128,000 live in other continuing care facilities such as assisted and supported living, lodges, and manors.² In Canada, facilities designated as long-term care or nursing homes are analogous to skilled nursing homes in the United States. The COVID-19 pandemic has profoundly exacerbated longstanding, deeply rooted quality and funding problems in the nursing home sector.^{3–5} In Canada, nursing homes were extremely affected by COVID-19 infections and deaths. Although in the first year of the pandemic, deaths as a proportion of total country deaths were a staggering 80% in nursing homes, by the March to August 2021 period this had dropped to 43%, attributed to an aggressive vaccination campaign.⁶ Infections and deaths in nursing homes varied across provinces and fluctuated over time. In Alberta, infections and deaths peaked during September 2020–March 2021, with resident cases and deaths per 100,000 population being 62 and 16, respectively (higher than the national averages).⁶ Along with other provinces in Canada, Alberta issued numerous emergency orders in the first year of the pandemic (2020), such as strict visitor restrictions, care restrictions (eg, restricting dining and recreation activities), and single-site staffing guidelines.⁶ They began to lift these restrictions in April 2021 with the increase of vaccination administration in nursing homes.⁶ The pandemic and sometimes the various restrictions caused significantly increased workloads, staffing shortages, and severe effects on physical and mental health, well-being, and quality of life for both residents and staff.^{7–11} However, despite the central importance of managers (directors of care and unit managers) in nursing homes during this period and as a general rule, there has been little research on them.⁸

Nursing home managers are pivotal in delivering good quality care. High manager turnover is associated with higher turnover of frontline workers, lower quality of care, and more deficiencies identified at inspection.^{5,12} Nursing home managers drive patient safety¹³ and shape relationships essential for quality and safety among management, residents, and workers.¹⁴ The need to support managers to reduce turnover in nursing homes is urgent.¹⁵

Among reports on the impact of COVID-19 on the health care workforce generally, a small number of qualitative studies report that rising responsibilities and moral distress have pushed some hospital-based nurse leaders to consider leaving.^{16,17} A recent Canadian qualitative study reported that in early 2021 nursing home managers had experienced overwhelming workloads, adverse mental and emotional impact, high burden of worry over staff health, and intention to leave among some.¹⁸ Two recent reviews report worrisomely high levels of distress on mental health and well-being measures for all health workers, but do not report specifically on managers.^{19,20} This lack of data on managers leaves policy makers without the granular information needed to understand different levels of risk among worker categories or to plan risk mitigation. It also leaves them without data to inform effective support for managers and future prevention of adverse outcomes.

Other than a letter reporting high levels of job satisfaction but significant risk for burnout among nursing home managers just prior to the pandemic's start,²¹ we found no studies comparing any *pre-pandemic* baseline measures with those taken *during the pandemic* for nursing home managers. The purpose of this study was therefore to evaluate changes among nursing home managers from a February 2020 prepandemic baseline cohort to a December 2021 COVID-19 cohort of nursing home managers. In the region reported on here (Alberta, Canada), the first COVID-19 case in nursing homes was reported on March 11, 2020, 2 weeks after our prepandemic survey finished.

Methods

Study Design

We conducted a repeated survey (prepandemic and 21 months into the pandemic) as part of the Translating research in Elder Care (TREC) research program—a longitudinal program of applied health services research in nursing homes that focuses on improving quality of care and quality of life for residents and quality of work life for care staff.²² The TREC program, established in 2007, has recruited and followed up a cohort of nursing homes in Western Canadian provinces and has conducted surveys with various groups of staff from participating nursing homes.²² In this study, we used data from the care manager survey in February 2020 and again in December 2021.

Setting and Nursing Home Sample

We sampled managers in nursing homes in urban areas of Alberta, Canada. Participating nursing homes had been randomly selected stratified by health region, nursing home size, and ownership model. Across 2 time points, 25 nursing homes participated in both surveys.

Participants (Manager Sample)

For each wave of data collection, all care managers of resident care units from the participating nursing homes were invited to complete a standardized online survey if they met the eligibility criteria of (1) managing a unit (having clinical management responsibilities), (2) working for at least 3 months in the nursing home, and (3) working a minimum of 6 shifts per month. Eligible care managers who agreed to participate completed the entire online survey anonymously. As a result, 181 care managers (87 in the pre-COVID survey, 94 in the COVID survey) comprised a repeated cross-sectional sample. We did not follow up nonresponders in either time point, nor are we able to link the managers from one time point to another. Based on our field logistical data approximately 50% of the sample were repeating managers. Some managers also held additional roles (eg, director of care, nursing home administrator).

Ethics

This study was approved by the University of Alberta ethics board (Pro00037937).

Measures

Quality of work life and health outcomes

We examined quality of work life and health variables in both surveys, specifically job satisfaction, burnout (exhaustion, cynicism, efficacy), organizational citizenship behaviors, and health (physical, mental).

Job satisfaction was measured with the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale, which has 3 items (I am satisfied with my job, I like my work, I like working here) scored on a 1 to 5 Likert scale (1 = strongly disagree to 5 = strongly agree).²³ Scores are derived by taking a mean of the 3 items. Cronbach alpha for job satisfaction in the pre-COVID sample was 0.86 and 0.87 in the COVID sample.

Burnout was measured using the 9-item Maslach Burnout Inventory (MBI) General Survey (short form). This version of the MBI has 3 subscales—exhaustion, cynicism, and efficacy.²⁴ Each has 3 items measured on a 7-point frequency scale (0 = never to 6 = daily). A mean is taken for each subscale; no overall burnout score is derived. High scores on exhaustion and cynicism indicate high burnout, as do

low scores on professional efficacy. Cronbach alpha in the pre-COVID sample was 0.76 for exhaustion, 0.70 for cynicism, and 0.74 for efficacy; in the COVID sample, it was 0.84 for exhaustion, 0.75 for cynicism, and 0.60 for efficacy.

Change-oriented organizational citizenship behaviors (OCBs) are constructive efforts by individuals to identify and implement changes to work methods, policies, and procedures to improve performance. We used the 4-item measure from Choi²⁵ to measure care manager OCBs. Each item was scored as 1 (strongly disagree) to 5 (strongly agree); the average of the items is the overall score for OCBs. Cronbach alpha for OCBs in the pre-COVID sample was 0.75 and 0.76 in the COVID sample.

Physical and mental health status were measured using the Short Form–8 Health Survey (SF-8). The SF-8 contains 8 items; 2 composite scores are generated for physical and mental health based on scale algorithms provided by the scale development team (each with range of 0–100).²⁶ Lower scores reflect poorer health.

Variables related to experiences during COVID-19

The COVID survey also included variables about pandemic-focused *burden of worries* and *intention to leave*. Care managers were asked to rate the degree to which they were concerned about staff mental health (eg, anxiety, irritability, apathy) and behavioral health (eg, alcohol use, tobacco use, a change in eating habits). Each item was measured with a 5-level scale (from 1 = not at all concerned to 5 = extremely concerned). For each item, we recoded 1 and 2 to 0, 3 to 0.5, and 4 and 5 to 1. We summed the recoded 7 items of mental health to create a composite score for burden of worries about staff mental health (range of 0–7). We used the same method to construct a composite score for burden of worries about staff behavioral health (range of 0–6).

We asked participants how often during the past year they had thought about leaving the nursing home and their job as a nursing home manager. Each “intention to leave” question was measured with a 5-level scale (from 1 = never to 5 = every day). We asked an open-ended question about their reasons for considering leaving.

Statistical Analysis

To examine pre-COVID and COVID differences in quality of work life and health variables, we first used 2-factor analysis of variance, with one factor being survey time point and the other factor being nursing home ID. We controlled for between-home variance as we assumed that individual care managers from the same nursing home tended to report similar scores on quality of work life and health variables irrespective of survey time points, rendering substantial between-home variances that need to be adjusted.²⁷ We then used linear regression analysis to examine adjusted differences between survey time points, controlling for staffing and resident average acuity level in the nursing home (2 variables that were associated with the survey time point). Specifically, we use 2-level random intercept linear regression to control for between-home variance. We also conducted subgroup analysis to examine if differences between survey time points differed for subgroups defined by nursing home size and ownership model.

Using only the COVID survey sample, we conducted linear regression to examine adjusted associations of quality of work life and health variables with experiences related to COVID (burden of worries and intention to leave). We regressed each quality of work life and health variable (dependent variable) on burden of worries, controlling for care manager characteristics (age, sex, birth country, primary role, years worked in current role) and nursing home characteristics [staffing, average of resident case mix index, nursing home COVID infection status (number of COVID outbreak episodes from the beginning of the pandemic to data collection)].

Next, we regressed intention to leave (dependent variable) on quality of work life and health variables and 2 “burden of worries” variables separately, controlling for care manager and nursing home characteristics as above. We used Stata 15.0 to perform analyses.

Results

Sample Characteristics

Table 1 shows characteristics of care manager samples for both surveys. The response rate was 67% for the pre-COVID survey and 83% for the COVID survey. The proportions of care managers aged 50 years or older was 54% (47/87) and 44% (41/94) for the pre-COVID and COVID surveys, respectively, and the proportions of female care managers were 92% (79/87) and 86% (81/94). No statistically significant differences were found in age or sex between the 2 samples.

In the pre-COVID survey, 60% (52/87) of our sample reported that their only role was unit manager, 17% (15/87) were also directors of care, and 23% (20/87) were nursing home administrators who also covered care units as a unit manager (most often in smaller homes). Role categories for the COVID survey were not statistically different from the pre-COVID survey: unit managers 73% (69/94), directors of care 12% (11/94), and nursing home administrators 15% (14/94) (**Table 1**).

Differences Between Survey Time Points in Quality of Work Life and Health Variables

The 2-factor analysis of variance showed that cross-sample (from pre-COVID to COVID) scores worsened at statistically significant levels on job satisfaction, SF-8 mental health, MBI-cynicism, MBI-exhaustion, and MBI-efficacy (**Table 1**). In regression analysis (controlling for staffing and the average of resident case mix index), statistically significant cross-sample differences were found in job satisfaction (mean difference -0.26 , 95% CI -0.47 to -0.06 ; $P = .011$), MBI-cynicism (mean difference 0.43 , 95% CI 0.02 – 0.84 ; $P = .040$), MBI-exhaustion (mean difference 0.84 , 95% CI 0.41 – 1.27 ; $P < .001$), and SF-8 mental health (mean difference -6.49 , 95% CI -9.6 to -3.39 ; $P < .001$) (**Table 2**). Cross-sample change patterns for subsamples (by nursing home size and ownership model) were similar to those of the overall sample (**Table 2**).

Prestudy Stability of Measures

We compared our measures with those of managers across 3 waves of TREC data collection in 2014, 2017, and 2020 that used the same methodology. We found managers generally reported favorable and stable scores on these variables with no statistical differences by wave (job satisfaction 4.42–4.46, MBI-cynicism 1.28–1.46, MBI-efficacy 4.75–4.87, MBI-exhaustion 1.56–1.61, SF-8 mental health 51.66–52.13, SF-8 physical health 51.53–51.87, OCBs 3.99–4.02).

Associations of Quality of Work Life and Health Variables With COVID-19 Experiences

Burden of worries

In **Table 1**, we report 2 kinds of nursing home managers' experiences related to COVID-19: intention to leave and burden of worries. Mean scores on the 7 items for “being concerned about staff mental health” were 3.37 to 4.42 and on the 6 behavioral health items were 1.52 to 2.15. Managers were most concerned about staff experiencing “excessive fatigue” (mean 4.42, SD 0.74) and staff “anxiety” (mean 4.23, SD 0.92). Overall burden of worries was 5.91 (SD 1.75, range 0–7)

Table 1
Nursing Home Characteristics and Care Manager Sample Characteristics

Nursing Home Characteristics (n = 60)	Pre-COVID Survey (n = 34)	COVID Survey (n = 26)			
	No. (%)	No. (%)			
Nursing home size					
Small (<80 beds)	7 (21)			7 (25)	
Medium (80-120 beds)	8 (24)			6 (21)	
Large (>120 beds)	19 (56)			15 (54)	
Nursing home owner-operator model					
Public not for profit	7 (21)			7 (25)	
Private for profit	13 (38)			8 (29)	
Voluntary not for profit	14 (41)			13 (46)	
		Mean (SD)	Mean (SD)	F	P
Nursing home staffing: total care hours per resident day		2.49 (0.75)	2.87 (0.73)	13.39*	.001
Nursing home average case mix index		0.76 (0.05)	0.80 (0.06)	52.61*	<.001
Nursing home COVID infection status (number of COVID outbreak episodes before the data collection)		—	4.7 (3.1)	—	—
Care Manager Sample Characteristics (n = 181)	Pre-COVID Survey (n = 87)	COVID Survey (n = 94)	Chi ²	P	
	No. (%)	No. (%)			
Age			2.72	0.61	
<30 y	2 (2)	4 (4)			
30-39 y	19 (22)	21 (22)			
40-49 y	19 (22)	28 (30)			
50-59 y	26 (30)	24 (26)			
≥60 y	21 (24)	17 (18)			
Female	79 (92)	81 (86)	1.47	.23	
Role			3.80	.15	
Unit manager	52 (60)	69 (73)			
Director of care	15 (17)	11 (12)			
Nursing home administrator	20 (23)	14 (15)			
		Mean (SD)	Mean (SD)	F	P
Years in current role		6.99 (6.55)	5.86 (6.08)	1.44	.23
Years worked in current home		6.57 (6.64)	6.28 (6.52)	0.09	.76
Quality of work life variables					
Job satisfaction		4.41 (0.55)	4.11 (0.72)	8.78 [†]	.004
MBI cynicism		1.45 (1.12)	1.93 (1.36)	6.55 [†]	.01
MBI efficacy		4.71 (1.01)	4.42 (0.94)	5.19 [†]	.02
MBI exhaustion		1.65 (1.19)	2.53 (1.5)	15.13 [†]	<.001
SF-8 Mental health		50.72 (8.64)	44.6 (10.41)	17.95 [†]	<.001
SF-8 Physical health		50.61 (7.44)	49.51 (8.3)	0.20 [†]	.65
Organizational citizenship behaviors		3.98 (0.5)	3.99 (0.54)	0.35 [†]	.55
Experiences related to COVID-19					
Sum of “worry about staff’s mental health (eg, excessive fatigue, sleep difficulties, anxiety)” (0-7)		—	5.91 (1.75)	—	—
Sum of “worry about staff’s behavioral health (eg, alcohol use, cannabis use, tobacco use)” (0-6)		—	1.38 (2.18)	—	—
Leaving the nursing home (1-5)		—	2.15 (1.10)	—	—
Leaving your job (1-5)		—	2.05 (1.05)	—	—

*Repeated analysis of variance.

[†]2-factor analysis of variance controlling for nursing home ID.**Table 2**
Adjusted Mean Difference Between Survey Time Points in Quality of Work Life and Health Variables and Subgroup Analysis by Nursing Home Size and Ownership Model

Quality of Work Life and Health Variables	Adjusted Mean Difference (Covid Survey – Pre-COVID Survey)				
	Overall Manager Sample (n = 181)	Nursing Home Size		Nursing Home Ownership Model	
		Small or Medium (n = 48 Managers)	Large (n = 133 Managers)	Not for Profit (Public and Voluntary) (n = 120 Managers)	Private for Profit (n = 61 Managers)
Job satisfaction	–0.26* (–0.47, –0.06)	–0.14 (–0.48, 0.21)	–0.30* [†] (–0.55, –0.05)	–0.30* (–0.56, –0.04)	–0.10 (–0.41, 0.22)
MBI cynicism	0.43* (0.02, 0.84)	0.68* (0.06, 1.30)	0.22 (–0.29, 0.72)	0.57* (0.02, 1.12)	0.11* (–0.48, 0.70)
MBI efficacy	–0.26 (–0.58, 0.06)	–0.52 (–1.09, 0.04)	–0.16 (–0.55, 0.23)	–0.37 (–0.83, 0.09)	–0.16 (–0.60, 0.28)
MBI exhaustion	0.84 [†] (0.41, 1.27)	1.04* [†] (0.27, 1.81)	0.70* [†] (0.18, 1.22)	1.06 [†] (0.49, 1.63)	0.44 (–0.22, 1.10)
SF-8 mental health	–6.49 [†] (–9.6, –3.39)	–8.6 [†] (–13.45, –3.75)	–4.86* [†] (–8.62, –1.09)	–7.94 [†] (–12.23, –3.64)	–4.61* (–8.90, –0.32)
SF-8 physical health	–1.14 (–3.67, 1.39)	0.70 (–2.89, 4.29)	–1.72 (–4.95, 1.50)	–1.92 (–5.12, 1.29)	0.38 (–4.04, 4.80)
Organizational citizenship behaviors	0.01 (–0.16, 0.18)	–0.25 (–0.51, 0.01)	0.13 (–0.08, 0.34)	–0.03 (–0.25, 0.19)	0.13 (–0.15, 0.42)

Results are from 2-level random intercept linear regression analyses that controlled for clustering of care managers nested within the same nursing home. Each quality of work life and health variable was regressed on survey data collected (reference group was Pre-COVID survey, February 2020) controlling for covariates including total hours per resident day and nursing home average of case mix index. We also conducted subgroup analysis to examine if differences between survey time points differed by subgroups defined by nursing home size and ownership model.

*P < .05.

[†]P < .025 (adjusted P value for subgroup analyses).[‡]P < .001.

Table 3
Regression Analysis Testing Associations of Quality of Work Life and Health Variables With Burden of Worries, Using the COVID Survey Data (N = 94 Managers)

	Job Satisfaction	MBI Cynicism	MBI Efficacy	MBI Exhaustion	SF-8 Mental Health	SF-8 Physical Health	OCBs
Sum of “worries about staff’s mental health” ^a	−0.10; −0.04 (−0.13, 0.05)	0.13; 0.1 (−0.07, 0.27)	0.08; 0.05 (−0.06, 0.15)	0.29 [‡] ; 0.24 (0.07, 0.42)	−0.16; −0.95 (−2.17, 0.28)	− 0.29 [‡] ; −1.39 (−2.37, −0.41)	0.12; 0.04 (−0.03, 0.1)
Sum of “worries about staff’s behavioral health” ^a	−0.11; −0.04 (−0.11, 0.04)	0.06; 0.04 (−0.11, 0.18)	0.00; 0 (−0.09, 0.09)	0.09; 0.06 (−0.09, 0.22)	− 0.23 [‡] ; −1.18 (−2.23, −0.13)	−0.06; −0.25 (−1.09, 0.59)	0.12; 0.03 (−0.03, 0.09)
Control covariates							
Age (5-y intervals)	−0.13; −0.04 (−0.13, 0.04)	−0.02; −0.01 (−0.18, 0.15)	0.06; 0.03 (−0.08, 0.13)	−0.03; −0.02 (−0.19, 0.16)	−0.02; −0.11 (−1.31, 1.09)	−0.08; −0.33 (−1.29, 0.63)	−0.19; −0.05 (−0.11, 0.02)
Gender (reference group is male)							
Female	0.03; 0.06 (−0.39, 0.51)	−0.05; −0.19 (−1.07, 0.69)	−0.09; −0.25 (−0.79, 0.3)	−0.02; −0.07 (−1, 0.85)	−0.08; −2.36 (−8.76, 4.04)	0.03; 0.78 (−4.34, 5.9)	0.05; 0.08 (−0.26, 0.42)
Birth country (reference group is other countries)							
Canada	−0.05; −0.08 (−0.39, 0.23)	0.16; 0.44 (−0.17, 1.05)	− 0.33 [‡] ; −0.63 (−1, −0.26)	0.23 [‡] ; 0.71 (0.08, 1.35)	−0.23; −4.92 (−9.31, −0.53)	0.04; 0.65 (−2.86, 4.17)	−0.16; −0.18 (−0.41, 0.06)
Primary role (reference group is director of care/administrator)							
Unit manager	− 0.30 [‡] ; −0.48 (−0.84, −0.13)	0.20; 0.61 (−0.09, 1.32)	0.00; 0.00 (−0.43, 0.44)	0.12; 0.41 (−0.33, 1.14)	−0.18; −4.31 (−9.41, 0.8)	−0.10; −1.96 (−6.04, 2.13)	−0.10; −0.12 (−0.4, 0.15)
Work in current role (y)	0.12; 0.01 (−0.02, 0.05)	0.03; 0.01 (−0.05, 0.07)	0.10; −0.02 (−0.05, 0.02)	0.02; 0.01 (−0.06, 0.07)	0.01; 0.02 (−0.41, 0.45)	0.23; −0.33 (−0.68, 0.01)	0.10; 0.01 (−0.01, 0.03)
Total care hours per resident day	− 0.27 [‡] ; −0.33 (−0.61, −0.05)	0.19; 0.43 (−0.12, 0.97)	− 0.33 [‡] ; −0.52 (−0.85, −0.18)	0.13; 0.31 (−0.25, 0.88)	−0.09; −1.5 (−5.44, 2.45)	−0.14; −1.91 (−5.06, 1.25)	0.04; 0.03 (−0.18, 0.24)
Average of resident case mix index in the nursing home	0.00; −0.05 (−2.91, 2.82)	0.06; 1.46 (−4.21, 7.13)	0.21 [‡] ; 3.73 (0.26, 7.19)	0.09; 2.49 (−3.4, 8.38)	0.02; 4.22 (−36.59, 45.03)	−0.02; −3.54 (−36.19, 29.12)	0.00; 0.02 (−2.16, 2.21)
Number of COVID outbreak episodes before data collection	−0.04; −0.01 (−0.06, 0.04)	0.05; 0.02 (−0.08, 0.12)	0.16; 0.04 (−0.01, 0.1)	0.04; 0.02 (−0.08, 0.12)	−0.06; −0.17 (−0.86, 0.51)	0.19; 0.46 (−0.09, 1.01)	0.03; 0.00 (−0.03, 0.04)

Values are standardized coefficients β ; unstandardized coefficients B (95% CI).

^aCare managers were asked to rate the degree to which they were concerned about staff mental health (eg, anxiety, irritability, apathy) and behavioral health (eg, alcohol use, tobacco use, a change in eating habits). Each item was measured with a 5-level scale (from 1 = ‘not at all concerned’ to 5 = ‘extremely concerned’). For each item, we recoded 1 and 2 to 0, 3 to 0.5, and 4 and 5 to 1. We summed the recoded 7 items of mental health to create a composite score for burden of worries about staff mental health (range of 0–7). We used the same method to construct a composite score for burden of worries about staff behavioral health (range of 0–6).

[‡] $P < .05$.

Table 4
Regression Analysis Testing Associations of Intention to Leave With Quality of Work Life and Burden of Worries

	Leaving the Nursing Home	Leaving Your Job
Sum of “worries about staff mental health”	0.15; 0.09 (−0.03, 0.21)	0.22* ; 0.13 (0.01, 0.25)
Sum of “worries about staff behavioral health”	0.20; 0.1 (−0.02, 0.22)	0.23* ; 0.11 (0.01, 0.21)
Job satisfaction	−0.45† ; −0.68 (−0.97, −0.39)	−0.47† ; −0.68 (−0.97, −0.39)
MBI cynicism	0.52† ; 0.41 (0.27, 0.55)	0.49† ; 0.38 (0.24, 0.52)
MBI efficacy	−0.15; −0.18 (−0.45, 0.09)	−0.07; −0.08 (−0.33, 0.17)
MBI exhaustion	0.51† ; 0.37 (0.23, 0.51)	0.53† ; 0.37 (0.25, 0.49)
SF-8 mental health	−0.35* ; −0.04 (−0.06, −0.02)	−0.36* ; −0.04 (−0.06, −0.02)
SF-8 physical health	−0.28* ; −0.04 (−0.06, −0.02)	−0.35* ; −0.04 (−0.06, −0.02)
OCBs	−0.26* ; −0.54 (−0.95, −0.13)	−0.15; −0.29 (−0.70, 0.12)

Values are standardized coefficients β ; unstandardized coefficients B (95% CI).

The “burden of worries” variables and quality of work life variables were added to the regression models separately. Each regression model controlled for covariates of age, gender, birth country, primary role, years worked in current role, total care hours per resident day, average of resident case mix index in the nursing home, and number of COVID outbreak episodes before data collection.

* $P < .05$.

† $P < .001$.

for staff mental health and 1.38 (SD 2.18, range 0–6) for staff behavioral health.

Table 3 shows regression of quality of work life and health variables on burden of worries. After controlling for covariates, the sum of worries about staff mental health was statistically significantly associated with care managers' exhaustion ($\beta = 0.28$, $P = .008$) and physical health ($\beta = -0.29$, $P = .007$). The sum of worries about staff behavioral health was significantly associated with care managers' mental health ($\beta = -0.23$, $P = .031$).

Intention to leave

On average, care managers reported they had thought about leaving the nursing home (mean 2.15, SD 1.10) and their job as a care manager (mean 2.05, SD 1.05) at least a few times during the past year (Table 1). About 32% (30/94) and 28% (26/94) considered leaving the nursing home or the job as a care manager a few times a month or more frequently. Regression results in Table 4 show the independent association of each quality of work life and health variables and 2 “burden of worries” variables with intention to leave, controlling for care manager and nursing home characteristics. Job satisfaction ($\beta = -0.45$, $P < .001$), cynicism ($\beta = 0.52$, $P < .001$), exhaustion ($\beta =$

0.51, $P < .001$), mental health ($\beta = -0.35$, $P = .001$), physical health ($\beta = -0.27$, $P = .010$), and OCBs ($\beta = -0.26$, $P = .014$) were significantly associated with intention to leave the nursing home. Multiple variables were associated at statistically significant levels with intention to leave the job as a care manager: burden of worry about staff mental health ($\beta = 0.22$, $P = .032$), burden of worry about staff behavioral health ($\beta = 0.23$, $P = .032$), job satisfaction ($\beta = -0.47$, $P < .001$), cynicism ($\beta = 0.49$, $P < .001$), exhaustion ($\beta = 0.53$, $P < .001$), mental health ($\beta = -0.36$, $P < .001$), and physical health ($\beta = -0.35$, $P = .001$).

We also asked managers an open-ended survey question: “What is the reason(s) you have considered leaving the nursing home or the job?” The main reasons were excessive work demands, lack of support and recognition, feeling ineffective, stress or burnout, and personal or family issues (Table 5).

Discussion

This comparison of nursing home manager scores on key mental health and well-being measures, from pre-COVID (February 2020) to December 2021 in Alberta, demonstrated that manager mental health, well-being, and work life quality declined

Table 5
Answers to the Open-Ended Question “What Is the Reason(s) You Have Considered Leaving the Nursing Home?” (36 Care Managers Answered the Question)

Code	No. of Cases	Exemplar Quotes
Excessive demands (n = 14) Workload or demands	14	“Exhausted. Too many demands, audits, being held accountable for others' deficient work and not able to hold them accountable because of lack of time to follow up on issues, union requirements that make disciplinary action very difficult. No relief budget for managers, so if anyone is away sick or vacation, others have to double up to do the work.”
Lack of support and recognition (n = 13) Poor benefit, low pay, or low financial reward	6	“Personal finances, managers have not had a raise in many years although deductions/cost of living keep going up.”
Lack of support from upper management	4	“I have found the support from executive is non-existent when it come to the increased workload all managers have been faced with.”
Not being valued or recognized	3	“I do not feel valued by the company.”
Interpersonal relationship with staff	3	“Staff rapport is minimal, known that staff do not like me or appreciate my presence.”
Feeling ineffective (n = 8) Not being able to make change	5	“Not being able to affect change gets me frustrated”
Efficacy	3	“Lack of confidence in my role”
Stress or burnout (n = 8) Stress or burnout	8	“Stress related to job, and not being able complete all necessary tasks, as COVID increased workload a lot!”
Personal or family (n = 6) Personal or family issue	6	“To support my family and needing to be home more for my children”

For the open-ended question “What is the reason(s) you have considered leaving the job?” 28 managers answered. The answers were similar to those in this table about reasons for considering leaving the nursing home.

significantly during the pandemic. Managers reported worsening job satisfaction, burnout, and mental health. These measures had been stable for over a decade before the pandemic. In our “post-pandemic” sample, managers’ “burden of worry” about staff mental health and well-being was associated with higher manager burnout and exhaustion, and poorer manager mental and physical health. Managers’ intention to leave their position was associated with their poorer job satisfaction and mental and physical health, higher burnout, and lower scores for organizational citizenship behavior. To our knowledge, no other studies have reported on changes for these or similar measures from prepandemic to a later pandemic time point explicitly among this key workforce group. Nor have other studies attempted to quantify managers’ worry for staff under their supervision or to explore what contributed to this burden of worry. Importantly, managers’ burden of worry was associated with their intention to leave their job.

Our data do, however, fit with international data. Hower et al.²⁸ surveyed inpatient and outpatient long-term care nurse managers in Germany at 2 times (April 2020, January 2021). They did not examine specific mental health or well-being dimensions but focused on burden. They reported that burden (related to staff shortages and overload) from time 1 to time 2 had increased among outpatient managers and decreased among inpatient managers, speculating this may be due to vaccine availability in inpatient settings. A second paper from their study reported a significant association between general and pandemic-specific demands and intention to leave by long-term care managers.²⁹

In 2015 Wong and Spence-Laschinger³⁰ reported, in a large Canadian sample of hospital managers, that burnout was strongly associated with job strain, that job strain was associated with turnover intention, and that organizational commitment (analogous to OCBs) was protective for turnover intention. Iaconi et al.²¹ reported high levels of nursing home manager burnout prepandemic. This suggests that a significant increase in burnout among this group in the same settings and jurisdiction (nursing homes in Alberta, Canada) over a short period of time (less than 2 years) may be worrisome. The consequences of burnout among nurses include increased absenteeism, leaving the profession, worsening personal relations, and a more negative work environment—all these affect quality of care.³¹ Added personal effects include fatigue, difficulty concentrating, increased errors, lack of energy, insomnia, anxiety, and frustration.³²

Traditionally, and reflected in the COVID impact literature of the past 2 years, managers are studied and discussed with respect to *their effect on others and on care quality dimensions*. However, this manager group sits at an intersection of high demands from multiple groups: senior management, several groups of direct and indirect care staff, families, residents, regulators, and the media. During COVID that intersection has been under an intense microscope and expectations have risen dramatically. The findings we report here are one illustration of the cost this may be extracting. It may be that mitigating adverse outcomes in other groups, especially staff reporting to them, had a cost to their own well-being and placed them at risk for higher turnover. Future research and policy attention will need to focus on creating a more supportive environment for nursing home managers and on developing suites of feasible and effective stress reduction and management strategies tailored to meet the needs of the wide variety of managers who work in nursing homes. These strategies will need to ensure that the managers not only have, but believe they have, both the support and appreciation of key senior members of their organization. Work from trauma studies suggests that strategies that include activities that help individuals be in their bodies, include movement, activate the parasympathetic nervous system, and happen in the context of positive social interaction will be most useful for managing traumatic stress.³³

Limitations

This study has important limitations. First, the anonymous nature of the care manager sample precluded us from linking individual care managers across times and using longitudinal analytic methods, although participants were drawn from the same nursing homes in both surveys and response rates were high at both time points (67% and 83%). Second, survey responses are susceptible to recall and social desirability biases. However, we have used these survey questions with nursing home managers for 15 years and they have undergone extensive validation³⁴; questions are framed with specific short periods of recall. Third, we do not know how much experiencing the Omicron wave in the fall of 2021 influenced responses. Sexton et al. reported that health care workers in hospitals experienced a continuous increase in emotional exhaustion each year since the start of the pandemic.³⁵ Fully understanding the impact on managers will require follow-up across subsequent COVID waves and post COVID. Fourth, these findings may not be generalizable beyond urban nursing homes in Alberta.

Conclusions and Implications

This repeated cross-sectional analysis of survey responses from nursing home managers confirms declines in health and well-being as a result of working during the COVID-19 pandemic. If urgent policy attention is not given to this often overlooked but critical group, nursing homes are at risk of even higher levels of manager and staff turnover. In the midst of a global health workforce crisis, inability to sustain a healthy manager workforce with their significant responsibilities will jeopardize our ability to sustain nursing homes.

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