



# Nursing home managers' quality of work life and health outcomes: a pre-pandemic profile over time

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## ABSTRACT

**Aim** To examine trends in quality of work life and health outcomes of managers in nursing homes in Western Canada pre-pandemic.

**Methods** A repeated cross-sectional descriptive study using data collected in 2014–2015, 2017 and 2019–2020, in the Translating Research in Elder Care Programme. Self-reported measures of demographics, physical/mental health and quality of work life (eg, job satisfaction, burnout, work engagement) were administered and completed by nursing home managers. We used two-way analysis of variance to compare scores across times, controlling for clustering effects at the nursing home level.

**Results** Samples for data collection times 1, 2, 3, respectively, were 168, 193 and 199. Most nursing home managers were nurses by profession (80.63–81.82%). Job satisfaction scores were high across time (mean=4.42–4.48). The physical (mean=51.53–52.27) and mental (mean=51.66–52.13) status scores were stable over time. Workplace engagement (vigour, dedication and absorption) scores were high and stable over time in all three dimensions.

**Conclusions** Nursing home managers were highly satisfied, had high levels of physical and mental health, and generally reported that their work was meaningful over time pre-COVID-19 pandemic. We provided a comparison for future research assessing the impacts of the pandemic on quality of work life and health outcomes.

## BACKGROUND

Nursing home managers are responsible for forming positive work environments, which can reduce incidents of missed care, mortality, morbidity and health complications while also enhancing safety climates, staff engagement in quality initiatives, productivity and well-being of nursing staff.<sup>1–3</sup> Managers interpret and enforce organisational policies with a finite allocation of resources and are responsible for planning staffing and skill-mix on a unit in the nursing home, as well as supervising staff to ensure best clinical practices are being supported and adhered to.<sup>4</sup> Information on nursing home manager characteristics may assist us to identify issues related to the well-being of managers working in challenging work environments and their ability to engage in effective management practices that support optimal care for residents in nursing homes.

We found limited research on the characteristics of care managers in nursing homes, and no research examining their characteristics and quality of work life outcomes over time. A solid description of the

manager population in nursing homes would inform future research on this population and potentially provide guidance for intervention design. Therefore, our objective was to examine and describe trends in quality of work life and health outcomes of managers in nursing homes in Western Canada pre-COVID-19 pandemic (2014–2020).

## METHODS

We employed a repeated cross-sectional descriptive study design, using data collected in September 2014–May 2015 (time 1), May–December 2017 (time 2) and September 2019–March 2020 (time 3), as part of the Translating Research in Elder Care (TREC 2.0) Programme. TREC is a long-term, multiproject research programme aiming to improve the quality of care and quality of life for older adults in nursing homes and quality of work life for staff.<sup>5</sup> Nursing homes in Alberta, British Columbia and Manitoba were randomly sampled across three strata (region, size, owner-operator) for each data collection time. The five health regions were Edmonton zone (Alberta), Calgary zone (Alberta), Interior Health (British Columbia), Fraser Health (British Columbia) and Winnipeg Regional Health Authority (Manitoba). The nursing homes were categorised as large (more than 120 beds), medium (80–120 beds) or small (less than 80 beds). The owner-operator models were not-for-profit public (nursing homes owned and operated by federal, provincial, or municipal government or regional health authorities), not-for-profit voluntary (nursing homes owned and operated by voluntary, cultural, lay, service-based or religious organisations) and for-profit private (nursing homes owned by a corporation, private organisation, or individual and operated on a for-profit basis).

At the time of data collection, managers from participating nursing homes were invited to an online survey if they: (1) managed a unit in the nursing home (some managers might also work as directors of care, nursing home administrators), (2) worked for at least 3 months in the nursing home and (3) worked a minimum of six shifts per month. Self-reported measures included demographics, physical/mental health status and quality of work life outcomes (eg, adequate orientation, job satisfaction, burnout, work engagement, psychological empowerment, change-oriented organisational citizenship behaviours).

To examine cross-time variations of managers' demographic and job-related characteristics by time, we used one-way analysis of variance (ANOVA) for



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## Brief report

**Table 1** Nursing home managers' demographic and job-related characteristics

Demographic and job-related variables	Time 1 (n=168)	Time 2 (n=193)	Time 3 (n=199)	X <sup>2</sup> (p value)
	n (%)	n (%)	n (%)	
Primary role				2.90 (0.570)
Unit manager	81 (48.21)	108 (55.96)	102 (51.26)	
Director of care	44 (26.19)	43 (22.28)	44 (22.11)	
Nursing home administrator	43 (25.6)	42 (21.76)	53 (26.63)	
Nursing home size				2.09 (0.72)
Small (<80 beds)	32 (19.05)	32 (16.58)	28 (14.07)	
Medium (80–120 beds)	49 (29.17)	64 (33.16)	66 (33.17)	
Large (>120 beds)	87 (51.79)	97 (50.26)	105 (52.76)	
Owner-operator model				5.03 (0.28)
Public not for profit	22 (13.10)	37 (19.17)	41 (20.60)	
Private for profit	82 (48.81)	82 (42.49)	79 (39.70)	
Voluntary not for profit	64 (38.10)	74 (38.34)	79 (39.70)	
Age				14.73 (0.14)
20–29	7 (4.17)	2 (1.04)	6 (3.02)	
30–39	22 (13.10)	35 (18.13)	39 (19.6)	
40–49	59 (35.12)	58 (30.05)	45 (22.61)	
50–59	53 (31.55)	72 (37.31)	70 (35.18)	
≥60	27 (16.08)	26 (13.47)	39 (19.6)	
Sex				0.19 (0.91)
Male	18 (10.98)	19 (10.05)	19 (9.60)	
Female	146 (89.02)	170 (89.95)	179 (90.40)	
Profession				8.12 (0.09)
Nurse	135 (81.82)	154 (80.63)	160 (81.22)	
Other	30 (18.18)	37 (19.37)	37 (18.78)	
Degree				14.36 (0.026)*
Diploma/certificate	91 (54.49)	76 (39.79)	76 (38.38)	
Bachelor's degree	55 (32.93)	93 (48.69)	98 (49.49)	
Master's degree	21 (12.57)	21 (10.99)	23 (11.62)	
PhD/PharmD	0	1 (0.52)	1 (0.51)	
Specialised courses				0.47 (0.79)
Yes	69 (42.86)	82 (46.59)	83 (44.86)	
No	92 (57.14)	94 (53.41)	102 (55.14)	
Time worked in current role (year)				4.88 (0.56)
<3	62 (39.24)	68 (35.23)	59 (29.65)	
3–9	66 (41.77)	78 (40.41)	92 (46.23)	
10–19	23 (14.56)	38 (19.69)	39 (19.6)	
≥20	7 (4.43)	9 (4.66)	9 (4.52)	
Hours worked in the last 2 weeks				8.07 (0.23)
≤40	14 (8.59)	28 (14.66)	26 (13.07)	
41–60	16 (9.82)	16 (8.38)	18 (9.05)	
61–80	90 (55.21)	104 (54.45)	122 (61.31)	
>80	43 (26.38)	43 (22.51)	33 (16.58)	

\*Time 1 vs 2, time 1 vs 3.

interval-level variables and X<sup>2</sup> tests for categorical variables. In examining cross-time variations in quality of work life and health outcomes, we used two-factor ANOVA with one factor being survey time point and the other factor being nursing home identification number to control for clustering of managers nested within the same nursing homes. We conducted a series of subgroup analyses of two-factor ANOVA on quality of work life

**Table 2** Nursing home managers' perceptions of quality of work life (QWL) and outcomes

QWL and health variables (range)	Time 1 (n=168)	Time 2 (n=193)	Time 3 (n=199)	F (p value)
	Mean (SD)	Mean (SD)	Mean (SD)	
QWL and health				
Adequate orientation (1–5)	3.57 (1.12)	3.64 (1.11)	3.82 (0.98)	2.29 (0.10)
Job satisfaction (1–5)	4.42 (0.66)	4.48 (0.61)	4.46 (0.55)	0.32 (0.73)
Work engagement				
Vigour (0–6)	5.31 (0.92)	5.37 (0.88)	5.38 (0.77)	0.20 (0.82)
Dedication (0–6)	5.53 (0.78)	5.63 (0.62)	5.67 (0.62)	0.81 (0.45)
Absorption (0–6)	5.73 (0.48)	5.82 (0.41)	5.81 (0.41)	0.92 (0.40)
Maslach Burnout Inventory				
Exhaustion (0–6)	1.61 (1.42)	1.56 (1.16)	1.57 (1.24)	0.02 (0.98)
Cynicism (0–6)	1.46 (1.25)	1.28 (1.12)	1.41 (1.20)	0.19 (0.83)
Efficacy (0–6)	4.87 (0.94)	4.75 (0.94)	4.81 (0.94)	0.71 (0.49)
Health status (SF-8)				
Physical (0–100%)	52.27 (7.00)	51.83 (7.44)	51.53 (7.49)	0.71 (0.49)
Mental (0–100%)	52.01 (7.65)	52.13 (7.49)	51.66 (8.29)	0.29 (0.75)
Psychological empowerment				
Competence (1–5)	4.37 (0.55)	4.46 (0.53)	4.45 (0.47)	0.81 (0.45)
Meaning (1–5)	4.57 (0.54)	4.62 (0.53)	4.57 (0.50)	0.32 (0.72)
Self-determination (1–5)	4.27 (0.74)	4.36 (0.67)	4.37 (0.64)	0.82 (0.44)
Impact (1–5)	4.10 (0.67)	4.21 (0.64)	4.19 (0.64)	0.89 (0.41)
Change-oriented organisational citizenship behaviours (1–5)	3.99 (0.60)	3.98 (0.57)	4.02 (0.53)	0.64 (0.53)

and health outcomes to examine if cross-time variations differed by nursing home ownership model, size and primary role of nursing home manager. We used Bonferroni-adjusted p values for multiple comparisons.

## RESULTS

The samples for data collection times 1, 2, 3, respectively, were 168 (48.4% response rate), 193 (63.3% response rate) and 199 (65.9% response rate). Most nursing home managers were nurses by profession (80.63–81.82%). The time worked in the unit of a nursing home varied from less than 3 years to 10 years or longer. The number of hours worked within a 2-week period varied from <40 hours or >80 hours. A significant increase in managers receiving bachelor's degrees and decrease in receiving a diploma/certificate were seen over time ( $\chi^2=14.36$ ,  $p=0.026$ ). Nursing home managers reported mainly working in private for-profit owner-operator model nursing homes (39.70–48.81%), followed by a voluntary (eg, faith-based) not-for-profit owner-operator model (38.10–39.70%). Most managers worked in large (>120 beds) nursing homes (50.26–52.76%) (table 1).

Job satisfaction scores were high across time (mean=4.42–4.48). The physical (mean=51.53–52.27) and mental (mean=51.66–52.13) status scores of nursing home managers were stable over time (table 2). Workplace engagement (with three subscales—vigour, dedication and absorption) scores were high and stable over time in all three dimensions. The work engagement subscale, *absorption* scores, for the subgroup of managers from medium facilities significantly increased over time: time 1 (mean=5.69) vs time 2 (mean=5.89) ( $F=5.20$ ,  $p=0.01$ ) (table 3). Significant results were observed for the subgroup of managers whose primary role is administrator in the subgroup analysis by primary role: Maslach Burnout

**Table 3** Subgroup analysis by facility size

Quality of work life (QWL) and health variables (range)		Facility size				
			Time 1 (n=32)	Time 2 (n=32)	Time 3 (n=28)	
		Small				
		Medium	Time 1 (n=49)	Time 2 (n=64)	Time 3 (n=66)	
		Large	Time 1 (n=87)	Time 2 (n=97)	Time 3 (n=105)	F (p value)
QWL and health			Mean (SD)	Mean (SD)	Mean (SD)	
Adequate orientation (1–5)	Small	3.53 (1.11)	3.69 (0.90)	3.86 (1.08)	0.78 (>0.1)	
	Medium	3.33 (1.41)	3.58 (1.33)	3.77 (0.92)	1.82 (0.05)	
	Large	3.71 (0.93)	3.67 (1.02)	3.84 (0.99)	0.80 (>0.1)	
Job satisfaction (1–5)	Small	4.43 (0.71)	4.64 (0.43)	4.50 (0.62)	1.60 (>0.1)	
	Medium	4.43 (0.63)	4.47 (0.71)	4.48 (0.54)	0.11 (0.05)	
	Large	4.41 (0.67)	4.44 (0.60)	4.43 (0.55)	0.13 (>0.1)	
Work engagement						
Vigour (0–6)	Small	5.48 (0.69)	5.42 (0.57)	5.24 (0.90)	0.61 (>0.1)	
	Medium	5.27 (0.84)	5.46 (0.77)	5.39 (0.78)	1.08 (0.05)	
	Large	5.28 (1.03)	5.31 (1.02)	5.41 (0.74)	0.05 (>0.1)	
Dedication (0–6)	Small	5.67 (0.56)	5.70 (0.43)	5.57 (0.70)	0.48 (>0.1)	
	Medium	5.44 (0.91)	5.69 (0.57)	5.75 (0.41)	3.06 (0.05)	
	Large	5.52 (0.77)	5.57 (0.70)	5.64 (0.70)	0.05 (>0.1)	
Absorption (0–6)	Small	5.76 (0.50)	5.85 (0.25)	5.74 (0.39)	0.81 (>0.1)	
	Medium	5.69 (0.48)	5.89 (0.31)	5.88 (0.34)	<b>5.20 (0.0067)*</b>	
	Large	5.74 (0.48)	5.76 (0.49)	5.78 (0.46)	0.10 (>0.1)	
Maslach Burnout Inventory						
Exhaustion (0–6)	Small	1.65 (1.60)	1.43 (1.03)	1.20 (0.96)	0.65 (>0.1)	
	Medium	1.29 (1.27)	1.54 (1.17)	1.55 (1.26)	0.35 (0.05)	
	Large	1.77 (1.41)	1.61 (1.21)	1.69 (1.29)	0.02 (>0.1)	
Cynicism (0–6)	Small	1.39 (1.39)	0.90 (0.84)	1.14 (1.15)	1.67 (>0.1)	
	Medium	1.24 (0.96)	1.28 (1.24)	1.19 (1.05)	0.02 (>0.1)	
	Large	1.60 (1.33)	1.40 (1.11)	1.61 (1.27)	0.10 (>0.1)	
Efficacy (0–6)	Small	4.95 (1.02)	4.81 (0.93)	5.05 (0.82)	0.42 (>0.1)	
	Medium	4.94 (0.90)	4.90 (0.86)	4.80 (0.96)	1.05 (>0.1)	
	Large	4.80 (0.93)	4.64 (0.99)	4.75 (0.96)	1.13 (>0.1)	
Health status (SF-8)						
Physical (0–100%)	Small	49.50 (9.38)	52.43 (6.70)	53.61 (4.75)	2.55 (>0.1)	
	Medium	53.72 (5.30)	52.34 (7.04)	50.64 (8.01)	2.95 (0.056)	
	Large	52.53 (6.54)	51.30 (7.94)	51.53 (7.71)	0.77 (>0.1)	

Continued

**Table 3** Continued

Quality of work life (QWL) and health variables (range)	Facility size				
		Time 1 (n=32)	Time 2 (n=32)	Time 3 (n=28)	
	Small				
	Medium	Time 1 (n=49)	Time 2 (n=64)	Time 3 (n=66)	
	Large	Time 1 (n=87)	Time 2 (n=97)	Time 3 (n=105)	F (p value)
Mental (0–100%)	Small	52.82 (8.09)	53.79 (6.16)	51.92 (8.71)	0.57 (>0.1)
	Medium	51.24 (8.13)	52.64 (6.41)	52.50 (7.91)	1.15 (>0.1)
	Large	52.13 (7.25)	51.24 (8.43)	51.07 (8.44)	1.11 (>0.1)
Psychological empowerment					
Competence (1–5)	Small	4.27 (0.63)	4.45 (0.57)	4.45 (0.50)	1.57 (>0.1)
	Medium	4.38 (0.54)	4.52 (0.50)	4.43 (0.48)	1.14 (>0.1)
	Large	4.41 (0.52)	4.41 (0.55)	4.46 (0.46)	0.22 (>0.1)
Meaning (1–5)	Small	4.70 (0.53)	4.68 (0.42)	4.66 (0.42)	0.01 (>0.1)
	Medium	4.53 (0.55)	4.64 (0.56)	4.58 (0.46)	0.96 (>0.1)
	Large	4.55 (0.55)	4.58 (0.54)	4.55 (0.54)	0.07 (>0.1)
Self-determination (1–5)	Small	4.42 (0.66)	4.50 (0.49)	4.44 (0.51)	0.00 (>0.1)
	Medium	4.19 (0.77)	4.36 (0.74)	4.40 (0.63)	0.00 (>0.1)
	Large	4.26 (0.75)	4.32 (0.68)	4.32 (0.68)	0.31 (>0.1)
Impact (1–5)	Small	4.23 (0.67)	4.31 (0.58)	4.33 (0.47)	0.25 (>0.1)
	Medium	4.0 (0.67)	4.24 (0.63)	4.27 (0.66)	1.66 (>0.1)
	Large	4.10 (0.66)	4.15 (0.65)	4.09 (0.65)	0.04 (>0.1)
Change-oriented organisational citizenship behaviours (1–5)	Small	4.16 (0.46)	4.15 (0.42)	4.19 (0.52)	0.06 (>0.1)
	Medium	4.05 (0.53)	4.10 (0.45)	4.05 (0.56)	1.19 (>0.1)
	Large	3.88 (0.66)	3.85 (0.65)	3.96 (0.50)	1.30 (>0.1)
*Time 1 vs 2					

\*Time 1 vs 2.

Inventory-Efficacy time 1 (mean=5.26) vs time 2 (mean=4.91) (F=5.07, p=0.01) (table 4).

## DISCUSSION

Little is known about the overall characteristics of nursing home leadership, and the collection of information on the professionals working in nursing homes is vital to improving our understanding of this group.<sup>6</sup> We provided a profile of the quality of work life and health outcomes of this key workforce in the nursing home sector over time prior to the COVID-19 pandemic. We found that nursing home managers were highly satisfied in their roles, had high levels of physical and mental health, and generally reported that their work was meaningful over time pre-COVID-19 pandemic. Research pre-pandemic supports that nursing home managers had higher mental health scores than staff nurses and the overall Canadian population, with no differences found between nursing home and paediatric hospital settings.<sup>7</sup> High levels of job satisfaction could also be

Table 4 Subgroup analysis by primary role

Quality of work life (QWL) and health variables (range)		Primary role				F (p value)
		Unit manager (UM)	Time 1 (n=81)	Time 2 (n=108)	Time 3 (n=102)	
		Director of care (DOC)	Time 1 (n=44)	Time 2 (n=43)	Time 3 (n=44)	
		Administrator	Time 1 (n=43)	Time 2 (n=42)	Time 3 (n=53)	
QWL and health			Mean (SD)	Mean (SD)	Mean (SD)	
Adequate orientation (1–5)	UM	3.60 (1.00)	3.73 (1.13)	3.83 (0.99)	0.79 (>0.1)	
	DOC	3.66 (1.29)	3.56 (0.96)	3.82 (1.02)	1.12 (>0.1)	
	Administrator	3.40 (1.18)	3.50 (1.19)	3.79 (0.95)	1.11 (>0.1)	
Job satisfaction (1–5)	UM	4.40 (0.60)	4.42 (0.58)	4.43 (0.58)	0.11 (>0.1)	
	DOC	4.34 (0.82)	4.59 (0.54)	4.47 (0.54)	2.73 (0.07)	
	Administrator	4.54 (0.59)	4.54 (0.74)	4.50 (0.53)	3.12 (0.05)	
Work engagement						
Vigour (0–6)	UM	5.24 (0.95)	5.28 (0.98)	5.37 (0.79)	0.01 (>0.1)	
	DOC	5.22 (1.03)	5.49 (0.64)	5.24 (0.95)	1.56 (>0.1)	
	Administrator	5.54 (0.70)	5.49 (0.80)	5.51 (0.56)	2.67 (0.07)	
Dedication (0–6)	UM	5.47 (0.83)	5.57 (0.68)	5.57 (0.72)	0.08 (>0.1)	
	DOC	5.40 (0.94)	5.70 (0.55)	5.69 (0.58)	3.57 (0.03)	
	Administrator	5.76 (0.38)	5.70 (0.50)	5.82 (0.37)	1.65 (>0.1)	
Absorption (0–6)	UM	5.69 (0.58)	5.79 (0.46)	5.77 (0.47)	0.56 (>0.1)	
	DOC	5.75 (0.36)	5.89 (0.27)	5.85 (0.37)	2.65 (0.08)	
	Administrator	5.79 (0.36)	5.82 (0.37)	5.85 (0.31)	0.01 (>0.1)	
Maslach Burnout Inventory						
Exhaustion (0–6)	UM	1.74 (1.43)	1.63 (1.24)	1.68 (1.31)	0.55 (>0.1)	
	DOC	1.75 (1.51)	1.48 (1.13)	1.63 (1.31)	0.27 (>0.1)	
	Administrator	1.22 (1.25)	1.45 (1.00)	1.33 (1.03)	2.50 (0.09)	
Cynicism (0–6)	UM	1.57 (1.27)	1.35 (1.14)	1.51 (1.27)	0.11 (>0.1)	
	DOC	1.50 (1.28)	1.21 (1.16)	1.43 (1.24)	0.75 (>0.1)	
	Administrator	1.20 (1.18)	1.17 (1.06)	1.18 (1.01)	1.32 (>0.1)	
Efficacy (0–6)	UM	4.76 (0.94)	4.64 (1.04)	4.67 (1.00)	0.52 (>0.1)	
	DOC	4.67 (1.08)	4.87 (0.82)	4.82 (0.92)	1.07 (>0.1)	
	Administrator	5.26 (0.64)	4.91 (0.75)	5.07 (0.81)	5.07 (0.008)*	
Health status (SF-8)						
Physical (0–100%)	UM	51.34 (7.35)	51.20 (8.26)	50.92 (7.37)	0.18 (>0.1)	
	DOC	52.78 (6.70)	52.95 (5.88)	52.45 (7.89)	0.16 (>0.1)	
	Administrator	53.51 (6.54)	52.27 (6.62)	51.92 (7.43)	0.69 (>0.1)	

Continued

Table 4 Continued

		Primary role				
		Unit manager (UM)	Time 1 (n=81)	Time 2 (n=108)	Time 3 (n=102)	
		Director of care (DOC)	Time 1 (n=44)	Time 2 (n=43)	Time 3 (n=44)	
Quality of work life (QWL) and health variables (range)	Administrator	Time 1 (n=43)	Time 2 (n=42)	Time 3 (n=53)	F (p value)	
	Mental (0–100%)	UM	51.46 (7.96)	51.54 (8.13)	50.94 (8.90)	0.12 (>0.1)
		DOC	52.22 (8.38)	52.80 (5.77)	51.84 (8.58)	0.01 (>0.1)
		Administrator	52.84 (6.33)	52.92 (7.40)	52.88 (6.72)	0.46 (>0.1)
Psychological empowerment						
Competence (1–5)	UM	4.34 (0.54)	4.45 (0.58)	4.46 (0.48)	1.87 (>0.1)	
	DOC	4.39 (0.57)	4.39 (0.48)	4.41 (0.47)	0.25 (>0.1)	
	Administrator	4.43 (0.53)	4.54 (0.47)	4.47 (0.45)	0.28 (>0.1)	
Meaning (1–5)	UM	4.50 (0.56)	4.64 (0.52)	4.54 (0.54)	1.54 (>0.1)	
	DOC	4.53 (0.61)	4.65 (0.46)	4.64 (0.43)	0.27 (0.1)	
	Administrator	4.74 (0.39)	4.55 (0.61)	4.58 (0.48)	3.07 (0.05)	
Self-determination (1–5)	UM	4.19 (0.64)	4.28 (0.69)	4.27 (0.69)	0.40 (>0.1)	
	DOC	4.26 (0.94)	4.47 (0.53)	4.36 (0.61)	0.81 (>0.1)	
	Administrator	4.43 (0.68)	4.45 (0.75)	4.55 (0.54)	0.43 (>0.1)	
Impact (1–5)	UM	4.07 (0.62)	4.10 (0.62)	4.08 (0.66)	0.17 (>0.1)	
	DOC	4.14 (0.70)	4.34 (0.60)	4.31 (0.52)	1.09 (>0.1)	
	Administrator	4.11 (0.73)	4.35 (0.66)	4.28 (0.65)	1.30 (>0.1)	
Change-oriented organisational citizenship behaviours (1–5)	UM	3.86 (0.54)	3.91 (0.64)	3.96 (0.51)	0.80 (>0.1)	
	DOC	4.05 (0.71)	4.09 (0.51)	4.15 (0.54)	0.35 (>0.1)	
	Administrator	4.15 (0.54)	4.04 (0.42)	4.05 (0.54)	0.10 (>0.1)	
*Time 1 vs 2						

\*Time 1 vs 2.

seen in the acute care setting, in particular increasing with each level of leadership.<sup>8</sup> Satisfied nursing home leaders were less likely to express intent to leave their roles and derived job satisfaction from improving the lives and quality of care of residents.<sup>9</sup>

The COVID-19 pandemic has resulted in multiple challenges in all healthcare settings and exposed system-wide issues in nursing homes. Studies examining healthcare manager experiences during the pandemic report that managers experienced frustration, feelings of being overwhelmed, emotional exhaustion and other challenges in mental, physical, professional well-being during the pandemic.<sup>10–13</sup> In another study, the TREC 2.0 Programme reported a significant decline in the quality of work life for nursing home managers from immediately pre-pandemic to during the pandemic, suggesting that nursing home managers may be highly affected by the pandemic.<sup>14</sup> The results of our study described in this paper show us that nursing home managers generally had a positive experience of their work life pre-pandemic, and such emerging evidence supports that the pandemic had a critical impact on this workforce. Our



findings provide a solid description of the manager population in nursing homes at three time points before the pandemic that will be useful to others for assessing post-pandemic measures and may offer guidance for intervention design. Our findings can also be useful in the investigation of which factors during the COVID-19 pandemic influenced the decline in the quality of work life of nursing home managers and how the workplace can mitigate these factors to prepare this important workforce for future potential major events.

We were limited in that we cannot link managers over time to examine within-individual changes in outcomes due to anonymous data collection. Changes in age or years of working in current role may have increased due to the same individuals in each time of data collection. Usual cautions apply when interpreting findings due to potential self-report biases in survey responses. Our findings are relevant to nursing homes in specific provinces so it may not be generalisable to all nursing homes of Canada.

## CONCLUSION

Nursing home care managers are integral to the delivery of healthcare services, optimal staffing and patient outcomes in long-term settings. Quality of work life and health outcomes of nursing home care managers before the COVID-19 pandemic were stable and high over time. Our findings are essential to the knowledge about this critical workforce in nursing homes pre-pandemic. A portrayal of nursing home care managers over time prior to the effects of the COVID-19 pandemic provides a sound foundation and comparison for emerging and future research studies assessing the impacts of the pandemic on quality of work life and health outcomes.

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