DATA MATTERS

Quality of Work Life and Mental Well-Being for Long-Term Care Staff in Nova Scotia

Qualité de la vie au travail et bien-être mental chez le personnel des soins de longue durée en Nouvelle-Écosse

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Abstract

This study assesses the quality of work life for Nova Scotian continuing care assistants (CCAs) (n = 266), nurses (n = 144) and managers (n = 45) from 10 long-term care (LTC) homes in late 2021. CCAs scored significantly worse than nurses and managers on measures of mental health and anxiety. All groups reported high levels of cynicism and emotional exhaustion; CCAs' scores were higher than nurses or managers. CCAs scored significantly higher on professional efficacy than other groups. CCAs can derive a strong sense of accomplishment from their work, but results raise concerns of a potential breaking point. This suggests the need for continued action to support LTC staff.

Résumé

Cette étude évalue la qualité de l'équilibre entre vie professionnelle et vie privée chez les assistants de soins continus (ASC) (n = 266), chez les infirmières (n = 144) et chez les gestionnaires (n = 45) dans 10 foyers de soins de longue durée (SLD) de la Nouvelle-Écosse, à la fin de 2021. Les résultats pour les mesures de la santé mentale et de l'anxiété sont nettement moins bons chez les ASC que chez les infirmières et les gestionnaires. Tous les groupes ont signalé des niveaux élevés de cynisme et d'épuisement émotionnel; les scores étaient plus élevés chez les ASC que chez les infirmières ou les gestionnaires. Les ASC ont obtenu un score significativement plus élevé sur l'efficacité professionnelle que les autres groupes. Les ASC peuvent tirer un fort sentiment d'accomplissement au travail, mais les résultats soulèvent des préoccupations quant à un point de rupture potentiel. Cela suggère la nécessité d'une action continue pour soutenir le personnel des SLD.

Introduction

Long-term care (LTC) staff are a vital part of the healthcare system in Canada, especially as LTC demand continues to increase. Nova Scotia has one of the oldest populations in Canada (Statistics Canada 2023), and can expect increased need for LTC with rising rates of those with the highest LTC use, such as people aged 85 years and older (Hallman et al. 2022); and those living with dementia (Alzheimer Society of Canada 2022; Garner et al. 2018). Nova Scotian LTC homes, similar to those in other provinces, experienced significant challenges with staffing turnover and recruitment efforts before the COVID-19 pandemic; these challenges were exacerbated during and after the pandemic. A better understanding of the Nova Scotian LTC workforce will assist both the government and LTC providers in stabilizing the current workforce and ensuring healthy staffing levels to meet the projected demand.

The workplace conditions and well-being of LTC staff have received minimal research focus, though research in this area has increased in recent years due to the COVID-19 pandemic, revealing that working conditions have worsened and LTC staff have been pushed to their limits (Reynolds et al. 2022). Research on staff in LTC – such as continuing care

assistants (CCAs), nurses and managers – reports that each staff type had unique experiences and stressors during the COVID-19 pandemic and was under severe duress, as shown in outcomes such as poor mental health (Fisher et al. 2021; Havaei et al. 2021, 2022; Reynolds et al. 2022) and burnout (Boamah et al. 2023; Estabrooks et al. 2023; Leskovic et al. 2020; Navarro Prados et al. 2022).

Despite the importance of supporting this workforce, Nova Scotia has limited data about the health and well-being of LTC staff at both the local LTC home and the provincial level. Thus, the primary aim of this project was to provide a snapshot of the mental well-being and quality of work life (QWL) for Nova Scotia's LTC staff during the COVID-19 pandemic. This study also examined the differences in mental health between types of LTC staff. Establishing baseline data will help in measuring the potential impact of LTC policy changes on the workforce in the future. These findings, especially in the context of the post-COVID-19 pandemic era, will be informative to help meet the needs of this important workforce as policy and practice change.

Method

Study design and setting

Data used in this analysis were collected between October 2021 and December 2021 in 10 Nova Scotian licensed LTC homes. This voluntary convenience sample of homes was mostly not for profit, small- to mid-sized (<120 beds) and located in rural and urban areas. Each LTC home received a monetary stipend in recognition of their participation in this study.

Participants

Study participation within each home was voluntary and convenience-based with a small reimbursement offered for survey completion. Within each home, CCAs, registered nurses and licensed practical nurses were eligible to complete the survey if they had worked in the facility for longer than three months and worked at least six shifts over the past month. Managers had to be in their role for longer than three months. In addition, CCAs had to be able to identify one unit where they worked at least 50% of their shifts. For CCAs, surveys were computer-assisted interviews administered by trained interviewers over video-conferencing software during their work hours, with interviews taking 25–30 minutes to complete; for nurses and managers, surveys were self-directed online questionnaires with completion times of 20–25 minutes. Prior protocol development found that data quality and survey length using online surveys were acceptable for regulated staff such as nurses and managers, but care aides (such as CCAs) provided higher quality data in shorter survey times when surveys were administrated using computer-assisted interviews (Estabrooks et al. 2009). Further research on this method of data collection concluded a high level of data quality (Squires et al. 2012).

Ethics

Ethics approval was obtained from Mount Saint Vincent University Research Ethics Board (REB) File # 2021-016 and Nova Scotia Health REB #1027057.

Measures

Demographic variables were single questions asking for direct information about the participant. Well-being and QWL variables were diverse. Cynicism, emotional exhaustion and professional efficacy are subscales of the Maslach Burnout Inventory (MBI) (Maslach et al. 1996). Physical and mental health are derived from the Short Form 8 (SF-8) health measurement scale (Yiengprugsawan et al. 2014). Anxiety scores use the Generalized Anxiety Disorder (GAD-7) screening tool for general anxiety disorder (Spitzer et al. 2006), and job satisfaction is a modification of the Michigan Organizational Assessment Questionnaire-Job Satisfaction Survey (MOAQ-JSS-3) (Cammann et al. 1979). Further information on measures is provided in Appendix 1 (available online at www.longwoods.com/content/27348).

Analysis

For demographic variables, frequencies and percentages were calculated for categorical variables and a chi-squared test of independence was performed. Where results were significant at $\alpha = 0.05$, post-hoc analysis was conducted between care staff types again using a chi-squared test of independence. For continuous variables, means and standard deviations were calculated and an analysis of variance was conducted to compare results across care staff, and where results were significant at $\alpha = 0.05$, post-hoc analysis was conducted using Welch's two-sample *t* test (Welch 1947).

Means and standard deviations were calculated for well-being and QWL variables and were compared using a two-level random intercept linear regression model, with separate regressions run between each staff type. The LTC home was used as the class factor in order to control for the clustering of LTC staff nested within the same homes. An adjusted model was then created that controlled for years in the role and whether or not the respondent lived with a partner.

Results

Demographic characteristics

Table 1 summarizes the demographic comparisons between CCAs ($n = 266$, 46% RR [response rate]), nurses ($n = 144$, 39% RR) and managers ($n = 45$, 71% RR). Across all groups, staff tended to be middle-aged, female and Canadian-born. They typically worked 70–80 hours in the two weeks before the survey. CCAs were less likely to live with a partner than nurses ($p < 0.05$) and managers ($p < 0.001$), and managers had less experience in their staff role type than CCAs ($p < 0.001$) and nurses ($p < 0.001$).

TABLE 1. Demographic measures compared between care staff type and post-hoc analysis results

Measure		CCA	N	M	Total	Chi-square (*p*)	Post-hoc Chi-square (*p*)		
Age [*n* (%)]	<30	42 (15.8)	24 (16.7)	4 (8.9)	70 (15.4)	3.383 (0.908)	N/A		
	30–39	54 (20.3)	32 (22.2)	10 (22.2)	96 (21.1)				
	40–49	75 (28.2)	32 (22.2)	13 (28.9)	120 (26.4)				
	50–59	69 (25.9)	40 (27.8)	13 (28.9)	122 (26.8)				
	>60	26 (9.8)	16 (11.1)	5 (11.1)	47 (10.3)				
Sex [*n* (%)]	Male	26 (9.8)	10 (6.9)	5 (11.6)	41 (9.1)	1.123 (0.570)	N/A		
	Female	240 (90.2)	130 (90.3)	38 (88.4)	408 (90.9)				
Born in Canada [*n* (%)]	Yes	236 (88.7)	121 (84.0)	42 (93.3)	399 (88.9)	2.399 (0.301)	N/A		
	No	30 (11.3)	18 (12.5)	2 (4.4)	50 (11.1)				
Living with a partner [*n* (%)]	Yes	144 (54.1)	94 (65.3)	37 (84.1)	275 (61.5)	17.777 (<0.001)	**CCA-N*** 6.564 (0.010)	**CCA-M***** 12.566 (<0.001)	**N-M** 3.466 (0.063)
	No	121 (45.5)	44 (30.6)	7 (15.9)	172 (38.5)				
		CCA	**Nurse**	**Manager**	**Total**	**ANOVA *F* (*p*)**	**Post-hoc Welch's t (*p*)**		
Hours worked in two weeks [*mean* (*SD*)]		75.8 (14.6)	69.4 (19.8)	79.8 (11.0)	74.1 (6.5)	0.533 (0.466)	N/A		
Years in role [*mean* (*SD*)]		12.1 (9.7)	13.0 (12.1)	5.1 (6.9)	11.7 (10.5)	7.56 (0.006)	**CCA-N** −0.761 (0.447)	**CCA-M***** 5.962 (<0.001)	**N-M***** -4.478 (<0.001)

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
ANOVA = analysis of variance; CCA = continuing care assistant; M = manager; N = nurse; SD = standard deviation.
Post-hoc analysis only ran when chi-squared test of independence showed significance at $\alpha = 0.05$.

QWL characteristics

Table 2 summarizes QWL outcomes across the sample and comparisons between LTC staff types. Intra-class correlation coefficients (ICCs) (see Table 3) were typically low, implying little consistency in scores within each care home, with only job satisfaction (ICC = 0.31) showing a small level of per-home consistency. Cronbach's alpha for each scale can be found in Appendix 1; coefficients were acceptable and ranged from 0.72 to 0.91 with the exception of professional efficacy that had a Cronbach's alpha of 0.52. As evidenced in Table 3, generally, CCAs showed worse QWL outcomes than both managers and nurses, while nurses showed poorer QWL than managers on some measures and comparable outcomes on others.

Physical and mental health were both lower for CCAs than for managers with moderate-strength differences reported. Nurses also had lower physical and mental health scores than managers but with weaker differences. CCAs reported higher levels of anxiety than both nurses and managers, with stronger differences between CCAs and managers. CCAs scored higher (higher being worse) than both nurses and managers on the MBI subscales for cynicism and emotional exhaustion, with the strongest differences observed between CCAs and managers. CCAs scored higher (higher being better) on the MBI subscale for professional efficacy compared with both nurses and managers. Job satisfaction was consistently high with no significant differences among LTC staff types.

TABLE 2. Outcome means and standard deviations, by care staff type

Measure	*Mean (SD)*		
	CCA	N	M
SF-8 physical health (0–100)	**45.2** (9.31)	**47.4** (8.50)	**51.7** (9.17)
SF-8 mental health (0–100)	**42.9** (11.6)	**45.0** (11.3)	**47.6** (11.25)
Anxiety (0–21)	**8.19** (5.56)	**5.20** (5.19)	**4.67** (4.65)
MBI cynicism (0–6)	**2.77** (1.76)	**2.32** (1.56)	**1.89** (1.60)
MBI emotional exhaustion (0–6)	**3.66** (1.58)	**2.54** (1.64)	**2.15** (1.67)
MBI efficacy (0–6)	**4.91** (0.98)	**4.15** (1.06)	**4.37** (0.98)
Job satisfaction (1–5)	**3.99** (0.70)	**4.00** (0.75)	**4.25** (0.65)

CCA = continuing care assistant; M = manager; MBI = Maslach Burnout Inventory; N = nurse; SF-8 = Short Form 8.

TABLE 3. Well-being and QWL differences between care staff type using adjusted mixed-effects regression

Measure	Regression coefficient (95% CI)					Intra-class correlation
	N – CCA	M – CCA	M – N	Years in role	Living w/ partner	
SF-8 physical health (0–100)	**2.37***** (0.48 – 4.25)	**5.82***** (2.84 – 8.80)	**3.46*** (0.31 – 6.60)	**-0.07** (-0.15 – 0.01)	**0.32** (-1.44 – 2.08)	0.02
SF-8 mental health (0–100)	**1.45**** (-0.91 – 3.82)	**5.71***** (1.97 – 9.45)	**4.26*** (0.32 – 8.20)	**0.20***** (0.10 – 0.31)	**1.17** (-1.04 – 3.37)	0.01
Anxiety (0–21)	**-2.76***** (-3.89 – -1.63)	**-3.87***** (-5.65 – -2.10)	**-1.11** (-2.98 – 0.76)	**-0.05*** (-0.10 – 0.00†)	**-0.30** (-0.81 – 0.22)	0.02
MBI cynicism (0–6)	**-0.42**** (-0.77 – -0.07)	**-0.73***** (-1.28 – -0.19)	**-0.31** (-0.86 -0.26)	**0.01** (0.00 – 0.03)	**-0.06** (-0.38 – 0.27)	0.12
MBI emotional exhaustion (0–6)	**-1.12***** (-1.45 – -0.79)	**-1.43***** (-1.96 – -0.91)	**-0.31** (-0.86 – 0.24)	**0.00** (-0.01 – 0.01)	**-0.16** (-0.47 – 0.15)	0.12
MBI efficacy (0–6)	**-0.73***** (-0.94 – -0.52)	**-0.60***** (-0.93 – -0.27)	**0.13** (-0.22 – 0.48)	**-0.01** (-0.01 – 0.00)	**-0.03** (-0.22 – 0.17)	0.13
Job satisfaction (1–5)	**0.01** (-0.14 – 0.15)	**0.21** (-0.02 – 0.44)	**0.21** (-0.03 – 0.45)	**0.00** (-0.01 – 0.00)	**0.06** (-0.07 – 0.20)	0.31

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
† Presents as 0.00 due to rounding, 95% CI does not include 0.
CCA = continuing care assistant; CI = confidence interval; M = manager; MBI = Maslach Burnout Inventory; N = nurse; SF-8 = Short Form 8.

Discussion and Policy Implications

To the best of our working knowledge, our research demonstrates for the first time in Nova Scotia that nurses and managers working in LTC were comparable on most QWL measures, but CCAs tended to experience a poorer QWL than both nurses and managers when controlling for LTC home of origin, time spent in staff role and support at home (living with a partner). Apart from job responsibilities, staff roles also differ importantly in the kind of work they do in LTC homes (Berta et al. 2013), in the level and type of training and education (Andersen 2009), in access to professional development opportunities and in income (Van Houtven et al. 2020). These differences may account for some staff handling stressors better than others. Most of the direct care for residents such as hygiene, mobility and mealtime support is performed by CCAs (Chamberlain et al. 2019), resulting in higher physical demands. Thus, it is not surprising that they reported lower self-perceived physical health. CCAs also have lower education and training requirements, have a lower position on the care hierarchy and lower income compared to nurses and managers, as well as different demands on their time due to shift scheduling (Berta et al. 2013; Chamberlain et al. 2019, Van Houtven et al. 2020), which could account for some of the differences in mental health and burnout outcomes. In addition, since CCAs provide the majority of direct care (Chamberlain et al. 2019), the risk of exposure to COVID-19 through resident cases would be higher for CCAs (Greene and Gibson 2021), implying a different level of burden caused by the pandemic.

In this study, all groups scored high on efficacy with CCAs reporting higher scores on efficacy than both nurses and managers. The coexistence of high efficacy and personal accomplishment with negative burnout symptoms such as emotional exhaustion, cynicism and depersonalization has been documented before among LTC staff pre-COVID-19, implying worrying symptoms but still showing overall moderate to low burnout levels (Chamberlain et al. 2016; Costello et al. 2019; Estabrooks et al. 2015a). This was also reported during the COVID-19 pandemic in Western Canada, where, despite a decrease in efficacy when entering the COVID-19 pandemic, care aides still showed overall high efficacy levels (Song et al. 2023). While the ability of CCAs to derive a sense of accomplishment from their work even when facing challenging working conditions seems high, it raises concerns of a potential breaking point for this workforce.

These data suggest that CCAs should be a priority focus for Nova Scotian LTC staff initiatives at both the local care home and provincial levels. In 2022, intervention efforts mainly focused on the recruitment of more CCAs by increasing provincially funded care hours per resident day, increasing the rate of pay for CCAs and covering tuition and textbook costs for students enrolling in upcoming CCA programs, as well as expanding the capacity of the program (Campbell 2023; Government of Nova Scotia n.d.). While improving staffing levels is one way to improve conditions of care (Silas and Armstrong 2021), other important

aspects of the work environment such as staff feedback mechanisms and structural resources also play a significant role in the use of best practices in LTC (Estabrooks et al. 2015b); workplace culture, social capital and slack/flexibility in use of staffing were associated with missed and rushed care tasks (Song et al. 2020). There is more to improving working conditions and quality of care than maintaining staffing levels alone.

Conclusion

This research and a subsequent planned wave of data collection in 2024 will enable monitoring of the impact of recent LTC staffing initiatives. The understanding of LTC staff's physical and mental health, well-being and QWL in Nova Scotia during the COVID-19 pandemic suggests a workforce in need of support; in particular, CCAs reported a significantly worse QWL in Nova Scotian care homes during the COVID-19 pandemic than their nurse and manager counterparts. These poorer outcomes for CCAs could be related to a variety of background and professional factors. Due to the cross-sectional nature of this study and lack of pre-COVID-19 data, we cannot say definitively that the COVID-19 pandemic contributed to these poorer outcomes; however, Song et al. (2023) found in their longitudinal study of care aides in two Canadian provinces that MBI cynicism increased and SF-8 mental health decreased in comparison with pre-pandemic reports. Longitudinal tracking of mental well-being and QWL will provide important insights into the experience of LTC staff following the COVID-19 pandemic, help monitor the success of LTC staff interventions and aid in designing further supports and interventions.

Regardless of the reasoning behind the worsened QWL outcomes, concerns for the stability of the Nova Scotian LTC workforce and especially CCAs need to be addressed. As demand for LTC reaches unprecedented highs, current efforts to recruit and retain more LTC staff will play an important role in relieving the pressure experienced by these front-line care workers. In addition, further initiatives focusing on other aspects of QWL will be necessary to improve the work environment and, subsequently, quality of care.

Limitations and Future Directions

This research has some important limitations. We had a convenience sample of 10 LTC homes whose characteristics (size, location, owner-operator model) were not proportional or representative of the provincial LTC sector. A subsequent wave of data collection (2023–2024) will replicate this study across the four Atlantic provinces. This research will utilize a stratified random control design (using characteristics identified earlier) to enable generalizability of the results and ultimately provide evidence of where policies and practices are most needed to improve LTC staff well-being (ARCLTC 2023).

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