



## RELATIONSHIPS AMONG EMPLOYEES' WORKING CONDITIONS, MENTAL HEALTH, AND INTENTION TO LEAVE WITH SPECIAL REFERENCES TO ITS INDUSTRIAL MANAGEMENT

**Dr. Anurag Upadhayay**

*Assistant Professor,*

*P.G Department of Psychology, K.B.P. G College Mirzapur, Mahatma Gandhi Kashi*

*Vidyapith .Varanasi.*

*Corresponding Author: Dr. Anurag Upadhayay*

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### **Abstract:**

*Employee turnover is a large and expensive problem in the long-term care environment. Stated intention to leave is a reliable indicator of likely turnover, but actual predictors, especially for nursing assistants, have been incompletely investigated. This quantitative study identifies the relationships among employees' working conditions, mental health, and intention to leave. Self-administered questionnaires were collected with 1,589 employees in 18 for-profit nursing homes. A working condition index for the number of beneficial job features was constructed. Poisson regression modelling found that employees who reported four positive features were 77% less likely to state strong intention to leave ( $PR = 0.23$ ,  $p < .001$ ). The strength of relationship between working conditions and intention to leave was slightly mediated by employee mental health. Effective workplace intervention programs must address work organization features to reduce employee intention to leave. Healthy workplaces should build better interpersonal relationships, show respect for employee work, and involve employees in decision-making processes*

**Keywords: Intention To Leave, Mental Health, Nursing Homes, Working Conditions.**

### **Method:**

Sample all nursing homes participating in this study are for-profit facilities owned or managed by a single company that operates 217 long-term care facilities in 12 states in the Eastern United States. Each facility has about 100 to 150 employees, of whom 50 to 80 are clinical staff members. The larger "Pro-Care" cohort study collected questionnaire surveys among

permanent full- and part-time employees in 18 nonunionized nursing homes located in Maryland and New England (Maine, Massachusetts, and Rhode Island). This study used the cross-sectional data collected between January, 2007, and November, 2008. RNs, LPNs, CNAs, and other clinical staff members, such as physical and occupational therapists, participated in the survey in all 18 centres; office,

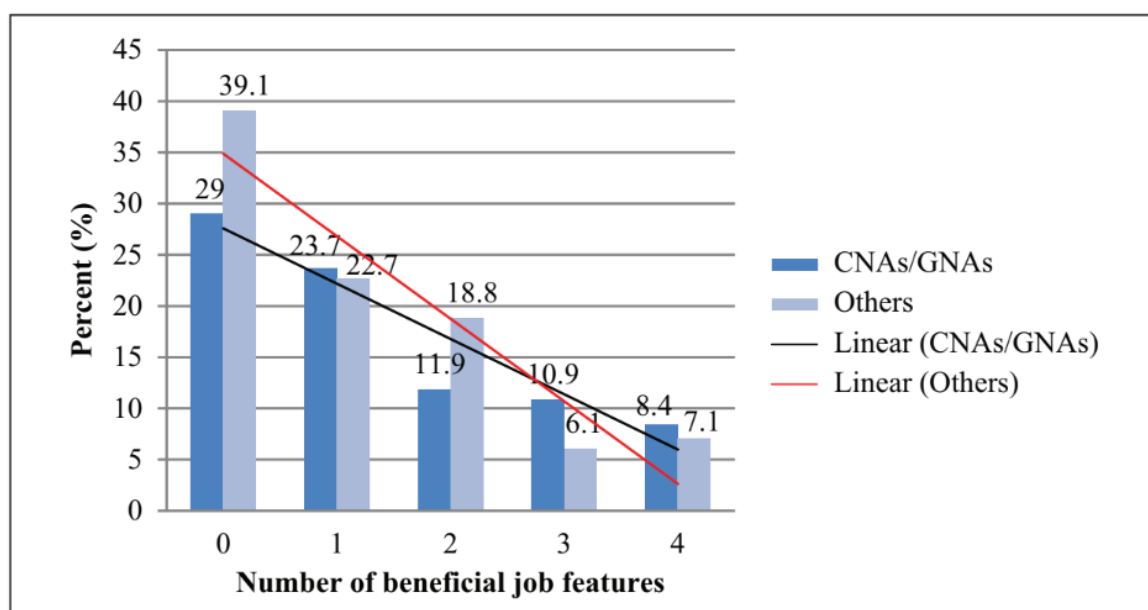
housekeeping, laundry, dietary, and other staff.

### Data Collection:

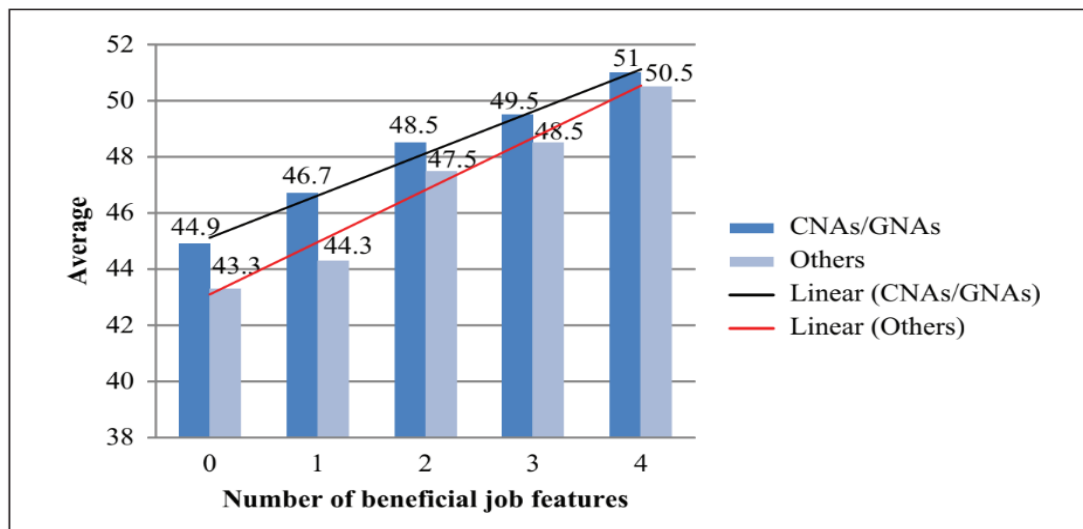
Questionnaires were distributed and collected at the nursing homes by the research team over a 2- to 4-day period, to accommodate employees from different shifts and units. Employees were reassured that the employer would not receive any identified information obtained, and they were given the option to take home to complete questionnaires in private. Most employees completed questionnaires during break times and returned them in person. Measurement of Variables Demographics. The questionnaire collected detailed information on employees' demographic characteristics, including age, gender, race and ethnicity, marital status, and

responsibility for children and other dependents. Children responsibility was measured with one single item, "How much responsibility do you personally have for any children under 18 in your household?" Four answer categories were used to assess this item: "There are no children under 18 at home"; "it's been share responsibility with another adult"; and "Another adult has primary responsibility." Working conditions. Aspects of working conditions included items on four psychosocial characteristics of the work environment: coworker support, supervisor support, receiving respect at work, and decision authority. Coworker support and supervisor support were each assessed by two items from the social support scale in Job Content Questionnaire (JCQ; Karasek et al., 1998).

**Figure 1: Association between strong intention to leave the job and working condition index**



**Figure 2. Association between employee mental health and working condition index**



### Measurement of Variables Demographics:

**Mental health:** The Short Form-12 Health Survey (SF-12) was included in the questionnaire. The Mental Component Summary (MCS) was used to measure mental health of participants, with a higher MCS score indicating better mental functioning. The SF-12 has demonstrated high reliability and validity in different populations (Ware, Kosinski, & Keller, 1996). **Intention to leave.** An employee's intention to leave was measured with one single item: "it's likely to leave this job in the next two years." This item was assessed with a 4-point Likert-type scale from strongly disagree to strongly agree. Intention to leave within the next 2 years was believed to reflect the actual willingness to leave (Kash, Naufal, Dagher, & Johnson, 2010).

### Data Analysis:

All analyses were conducted using SPSS software version 17.0. Intention to leave was examined by job title, shift work patterns and length, working second jobs, and demographic factors to identify possible confounders. Associations between working conditions, mental health, and intention to leave were assessed by Spearman correlation coefficient (Rho). The four working condition variables were moderately to strongly correlated with each other. Therefore, each one was dichotomized as "low" (0) or "high" (1) using median value as a cutoff point and added to give an index ranging from 0 to 4, which rated the number of beneficial job features. The working condition index was used for subsequent modelling. The association between working condition index and intention to leave was first assessed by cross-

tabulation analysis with the chi-squared test. Then Poisson log regression

modelling was used to calculate prevalence ratio among groups.

**Table. 1 Poisson Log Regression Results Predicting Strong Intention to Leave in 1,589 Nursing Home Employees**

Predictor Variable	N	Model 1		Model 2 <sup>a</sup>		Model 3 <sup>b</sup>	
		PR	95% CI	PR	95% CI	PR	95% CI
WCI							
0 (ref.)	86	1.00		1.00		1.00	
1	200	0.74	0.46-1.18	0.71	0.43-1.16	0.70	0.42-1.17
2	275	0.47**	0.29-0.76	0.48**	0.29-0.80	0.47**	0.28-0.80
3	371	0.28**	0.17-0.46	0.27**	0.16-0.46	0.28**	0.16-0.48
4	567	0.24**	0.15-0.39	0.23**	0.14-0.38	0.23**	0.14-0.39
Age							
40-60 (ref.)	665	—	—	1.00		1.00	
<40	713			1.52*	1.10-2.11	1.56**	1.11-2.19
>60	126			2.09**	1.25-3.48	2.04**	1.20-3.46
Shift work							
Day shift (ref.)	823					1.00	
Evening shift	305					1.21	0.82-1.80
Night shift	204					1.57*	1.03-2.38
Rotating shift	221					0.95	0.58-1.54

**Note:** WCI = working condition index; PR = prevalence ratio; N = number of employees. A Model 2 adjusted for age b Model 3 adjusted for age, race, marital status, job title, and shift work patterns. Race, marital status, and job title were not statistically significant. \* $p < .05$ . \*\* $p < .01$ .

It's shown any significant influence on employee intention to leave. Even in the multi-variate-adjusted model, the prevalence of employee strong intention to leave was reduced significantly when the number of beneficial job features was two or more. For employees who reported four beneficial job features, strong intention to leave was reduced by 77% (PR = 0.23,  $p < .001$ ). The effect modification of age on the association between working condition index and intention to leave was examined with stratification on age < 40 years (47.4%) and 40 to 60 years (44.2%). The results showed that the

interaction between age and working condition index was not statistically significant ( $\beta = -.01$ ,  $p > .05$ ), suggesting that age was not an effect modifier of this association. The multivariate regression evaluation for the mediating effect of mental health on the association between employee strong intention to leave and working condition index was summarized in Table. The mental health score was associated with employee strong intention to leave (PR = 0.98,  $p = .05$ ). The strength of relationship between working conditions and intention to leave was slightly reduced, whereas the

strength of relationship between age, shift work, and intention to leave was slightly increased when adding mental health into the model. The model suggested that mental health slightly mediated the association between working conditions and employee intention to leave. The prevalence of strong intention to leave reduced by 2% ( $\beta = -.02$ ) with per-unit mental health score. The effect of  $\Delta$  interquartile range (41.97-57.06) of mental health on the prevalence of employee strong intention to leave was 30%.

### Results Descriptive Statistics:

A total of 1,589 nursing home employees completed questionnaires between January, 2007, and November, 2008, primarily middle-aged women (Table 1). About one half were white, married, and having children

responsibility at home. Nearly one fifth reported working second jobs, and having responsibility for older adult, disabled, or other dependents at home. About half of the participants were CNAs/GNAs and reported working day shift and working 8-hr shift. A total of 598 participants (38%) reported any intention to leave in the next 2 years and among whom 194 participants (12%) reported a "strong" intention to leave. The average mental health score was 48.9, which is similar to the average value of 50 in the general population (Ware et al., 1996). More CNAs/GNAs were younger than 40 years of age; female; minority; single; having primary responsibility for children; doing evening, night, or rotating shifts; and reporting an intention to leave the job in the next 2 years than other employees.

### Poisson Log Regression Results for Mediating Effect of Mental Health on Associations between Working Conditions and Strong Intention to leave in 1,589 Nursing Home Employees are as below.

Predictor Variable	N	Model 3 <sup>a</sup>		Model 4 <sup>b</sup>	
		PR	95%CI	PR	95% CI
WCI					
0 (ref.)	86	1.00		1.00	
1	200	0.70	0.42-1.17	0.80	0.46-1.39
2	275	0.47**	0.28-0.80	0.52*	0.29-0.92
3	371	0.28**	0.16-0.48	0.32**	0.17-0.58
4	567	0.23**	0.14-0.39	0.27**	0.15-0.47
Age					
40-60 (ref.)	665	1.00		1.00	
<40	713	1.56**	1.11-2.19	1.65**	1.14-2.40
>60	126	2.04**	1.20-3.46	2.62**	1.51-4.56
Shift work					
Day shift (ref)	823	1.00		1.00	
Evening shift	305	1.21	0.82-1.80	1.23	0.81-1.87
Night shift	204	1.57*	1.03-2.38	1.69*	1.09-2.62
Rotating shift	221	0.95	0.58-1.54	0.90	0.53-1.52
Mental health	1,589	—	—	0.98*	0.97-1.00

**Note:** WCI = working condition index; PR = prevalence ratio; N = Number of employees.

- A. Model 3 adjusted for age, race, marital status, job title, and shift work patterns.
- B. Model 4 adjusted for age, race, marital status, job title, and shift work patterns. Race, marital Status, and job title were not statistically significant. \* $p < .05$ . \*\* $p < .01$ . Multivariate Statistics

Since the associations among strong intention to leave, mental health and working condition index in CNAs/GNAs and other employees were not significantly different, we combined the two groups for the following analysis. In Poisson log regression modelling of the prevalence of employee strong intention to leave, the number of beneficial job features continued to show a protective effect (Table 4). When adding age, race and ethnicity, marital status, job title, and shift work patterns into the model, only age and shift work showed a significant association with strong intention to leave ( $p < .05$ ). O.

### Discussion:

More than one third of all nursing home employees surveyed (37.6%) reported an intention to leave their jobs in the next 2 years. This figure is similar to results of previous studies of nursing home CNAs (Decker et al., 2009; Parsons et al., 2003; Sloane, Williams, & Zimmerman, 2010). The results are of concern because high employee turnover could lead to

increased economic costs and decreased quality of resident care. The number reported might not be generalizable to the national level because for-profit nursing homes have higher turnover rate than nonprofit nursing homes (Donoghue & Castle, 2006; Harrington & Swan, 2003; Kash et al., 2006). This might be due to differences in the organizational environment and resultant staff benefits and resident care, or for-profit nursing homes tend to maintain lower nursing staff levels, whereas lower staffing levels could be associated with higher turnover (Castle, 2008; Castle & Engberg, 2006).

### Practice Implications:

This quantitative cross-sectional study found that employee intention to leave was negatively associated with the number of beneficial job features. With the demand for employees in long-term care continuing to increase, more effort is needed to increase the supply. The study will serve as evidence for employers and top management to improve employee working conditions in the long-term care environment. Effective health promotion programs at workplace are important to stabilize the long-term care workforce. As Punnett et al. (2009) suggested, in addition to address individual behaviour's, effective workplace intervention programs must address "work organization features such as task design, incentive pay, and

decision latitude, quality of supervision, work scheduling, understaffing, and division of labour". Healthy workplaces should build better interpersonal relationships, show respect for employee work, and involve employees in decision making about work processes. Possible strategies for improving working conditions in the long-term care environment include establishing an employee recognition program, recognizing birthdays and personal accomplishments, writing thank-you notes or giving small prizes for working extra time and working on holidays, giving more opportunities for frontline care employees to get involved in making decisions about resident care and centre changes.

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