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Perceived Barriers to Effective Job Performance Among Nursing Assistants in Long-Term Care

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Abstract

Objectives: This research explored perceived barriers to job performance among a national sample of nursing assistants (NAs). Specific objectives were (a) to clarify which of the problems identified by previous research are most troublesome for NAs, (b) to develop a reliable quantitative measure of perceived barriers to job performance, and (c) to test construct validity of the measure vis-à-vis work-related psychological empowerment and job satisfaction.

Methods: Nursing assistants attending the 2006 national conference of the National Association of Health Care Assistants completed a paper-and-pencil survey including 33 barriers to job performance and standardized measures of empowerment and job satisfaction. The barriers were also rated by a small sample of NAs at a single Georgia nursing home.

Results: Factor analysis of barriers items yielded a 30-item Nursing Assistants Barriers Scale (NABS) comprising 6 subscales: Teamwork, Exclusion, Respect, Workload, Work Stress, and *New NAs*. Lack of teamwork and exclusion from communication processes were rated as most problematic by both samples. The 6 NABS subscales were significantly and independently associated with empowerment and satisfaction; different barriers predicted the two constructs.

Discussion: This study is a first step toward quantitative assessment of NAs' perceptions of barriers to doing their jobs. Primary limitations are the select sample and use of a job satisfaction measure that may have artificially inflated correlations with the NABS. Nonetheless, results confirm the validity of the new scale as an operationalization of the barriers construct.

Conclusion: The concept of barriers to job performance is a unique construct from work empowerment and satisfaction with one's job. Nursing assistants clearly differentiate various barriers, converging on workload and lack of teamwork as most problematic. Further work is needed to substantiate validity and reliability of the NABS, particularly with respect to NAs' actual job performance, intent to stay on the job versus leave, absenteeism and turnover.

Keywords

Nursing home staff; job performance; job satisfaction

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Conflicts of Interest

None of the authors has any conflicts of interest associated with this research.

The ongoing staffing crisis in skilled nursing facilities is well documented¹. The problem is particularly acute with respect to those individuals who provide the bulk of daily hands-on care^{2,3}: certified nursing assistants (NAs). In 2002, turnover among these workers nationwide averaged 71.1% nationwide; in 20% of nursing homes (NHs), NA turnover rates exceeded 100%⁴. Turnover is costly: the average cost to providers of hiring and training a single new NA has been estimated at about \$3,500⁵. Residents suffer from turnover as well. Staffing at the NA level has been shown to affect quality of care⁶; stability of staff is a factor in these effects^{7, 8}. Further, disruptions in continuity of care due to NA turnover affect residents' perceived quality of life as well as quality of care⁹.

One primary cause of turnover is, of course, dissatisfaction with one's work¹⁰. Nursing assistants typically face a number of "dissatisfiers" on the job. Structural characteristics such as the nature of the work itself¹¹ and low pay¹² obviously play a role. However, the stronger predictors of NAs' job satisfaction and retention are factors that impede their ability to get their work done and, hence, create stress on the job. Common complaints in this realm include lack of training^{13, 14}, poor communication and teamwork¹⁴⁻¹⁶, inadequate supervision¹⁵⁻¹⁷, understaffing¹⁸, and even lack of basic equipment and supplies¹⁹⁻²¹. Interpersonal dynamics among NH staff interfere with NAs' job performance due to cliqueishness²² and even overt verbal and physical conflict²²⁻²⁴. Problems with residents and family members are also frequently cited as work-related stressors²⁵⁻²⁷.

The research just reviewed paints a very consistent picture of aspects of their work that are troublesome for NAs. However, more in-depth study, as well as application of findings, is limited by methodological characteristics of existing research. Specifically, a large proportion of these studies are qualitative in nature, generating content through open-ended discussions with and observations of NAs on the job. This early work has been invaluable in delineating the parameters of nursing assistants' experiences and perceptions of their jobs. However, it cannot address how strongly those experiences and perceptions are associated with NAs' work attitudes, satisfaction and behavior. Recent, more structured research confirms associations between job satisfaction and turnover²⁸. However, beyond work on basic job characteristics²⁹ and a few motivational factors³⁰, there has been little attempt quantitatively to delineate what aspects of the job are most frustrating for NAs and how those frustrations are associated with job satisfaction, performance and turnover.

This research takes a first step toward filling that gap by exploring perceived barriers to job performance among a national sample of NAs. A first purpose was to clarify which of the problems identified by previous research are most troublesome for NAs. A second was to develop a reliable quantitative measure of perceived barriers to job performance among NH-based NAs. A third objective was to test convergent and divergent validity of the resulting instrument vis-à-vis standardized measures of work-related psychological empowerment and job satisfaction in a nationwide sample of NAs.

Method

Sample

The sampling frame for this research was all registered attendants at the 2006 conference of the National Association of Health Care Assistants (NAHCA; formerly the National Association of Geriatric Nursing Assistants [NAGNA]). Each registrant received, in her packet of on-site materials, a brief survey tapping demographic characteristics and work history, empowerment, barriers to work performance and job satisfaction. Surveys were completed individually and returned to a drop box at the conference site. A coversheet introduced the survey and provided informed consent information; returning the survey was taken as evidence

of consent. A \$50 gift certificate was awarded to one survey participant, chosen at random by a drawing during the conference. The study, including waiver of signed consent, was reviewed and approved by the Emory University Institutional Review Board.

Of the roughly 300 conference attendees, 216 returned a completed survey. The responses of the 28 non-NAs differed from those of individuals who self-identified as NAs on a number of key variables. The non-NAs were therefore excluded from further analysis.

Table 1 presents demographic and work characteristics of the 188 NAs who are the focus of this paper. The group resembled NAs nationwide^{31, 32} in that they were predominantly female, in their mid-30s and high-school educated. Only 4 of the 188 worked in non-residential settings; three of these were home hospice workers. Respondents had solid NH experience, averaging 11 years in long-term care and almost 7 years in the current position; this tenure is substantially higher than that reported for NAs nationally³². Almost half the sample lived in small towns, a third, in large cities.

Measures

In addition to demographic information, the survey included three classes of variables of interest here. The key construct of interest, *barriers to job performance*, was assessed with a list of 33 factors commonly cited as interfering with NAs' work performance. The 33 were compiled from a comprehensive review of the literature; open-ended interviews with 6 NAs who worked for a large, for-profit Georgia long-term care provider, and our own clinical and research experience.

Empowerment was assessed with a slightly modified version of the Psychological Empowerment Scale (PEI³³), a validated but non-nursing home specific measure of perceived autonomy and control on the job. For this project, 8 of the original 12 items were reworded to accommodate a lower reading level and/or to make them more relevant for NAs. For example, the item "I have a great deal of control over what happens in my department" was reworded to read "I have a lot of control over what happens on my unit." These changes reduced the Flesch-Kincaid grade level of the instrument from 8.1 (original) to 4.0 (our version). Spreitzer and colleagues³³ report that the scale comprises 4 subscales representing Meaning, Competence, Self-determination and Impact. However, when we evaluated internal consistency of subscales computed according to Spreitzer et al.'s original formulation, only Impact ($\alpha = .82$) attained the traditional .70 criterion for Cronbach's alpha; Meaning $\alpha = .62$, Competence $\alpha = .51$, Self-determination $\alpha = .68$. We therefore explored the factor structure of the PEI in our sample. Unrestricted principal components analysis with orthogonal rotation yielded a clean 3-factor structure for which the self-determination and impact items loaded on a single factor (which we labeled *Autonomy*) and one of the original Meaning items crossed over to load on the Competence factor. Cronbach's alphas for our 3 obtained scales supported the Autonomy ($\alpha = .81$) and Meaning factors (.78). Competence initially failed to attain traditional levels of acceptable consistency ($\alpha = .65$). However, removal of one item, "I have mastered the skills I need to do my job," raised alpha to .76. We therefore computed subscale composites for Autonomy, Competence and Meaning, along with a total Empowerment composite ($\alpha = .78$).

Job satisfaction was assessed using the Benjamin Rose Institute Nurse Assistant Job Satisfaction Scale³⁴, an 18-item multidimensional satisfaction scale specific to nursing assistants working in skilled nursing facilities. The scale has been shown to have good reliability and validity³⁵. Cronbach's α in our sample was .95.

Analytic approach

A first analytic task was development of the Nursing Assistant Barriers Scale (NABS), including subscale structure, through exploratory factor analysis. Once subscales were derived, we examined their associations with NAs' personal and work characteristics, and with primary outcomes of interest: work empowerment and job satisfaction. Finally, we examined interrelationships among barriers, empowerment and job satisfaction to establish convergent and discriminant validity.

Results

Development of the Nursing Assistant Barriers Scale

To characterize dimensionality of perceived barriers to job performance, we submitted the 33 barriers items to principal components factor analysis. As no single item was missing for more than 4 (2.2%) respondents, we used pairwise deletion of missing data to maximize overall sample size. An initial, unrestricted solution yielded 8 factors with eigenvalues > 1 , accounting for 65.9% of total variance. Orthogonal (varimax) rotation of factors was difficult to interpret due to several items' loading above the .40 criterion on multiple factors. In contrast, oblique rotation (oblimin; $\Delta = .3$) yielded a clearly interpretable 8-factor solution, including one single-item factor. Removal of that item yielded a clean 7-factor solution. A forced 6-factor solution was equally interpretable, with only two items not loading significantly on any factor. Compression to 5 factors caused several items to load on two factors. Hence, the 6-factor solution, using 30 items and accounting for 60.52% of total variance, was retained for primary analyses.

The 6 factors and items comprising them appear as Table 2. A first factor, *Teamwork*, included 5 items that accounted for 36% of total variance. This factor clearly represents perceived lack of cooperation among one's fellow NAs both overall and with respect to specific issues (calling in at the last minute; not leaving supplies for other NAs' use). *Job Stress* (6.7% of variance) includes a variety of problems that cause NAs to experience stress both on the job and at home. Note that one item, "It is hard to handle residents who have dementia," had a double load on this and another factor. Internal consistency analyses indicated a stronger association with *Job Stress*, so the item was retained on this factor. The third factor, *Respect*, (6 items, 5.6% total variance), addresses perceived rudeness and disrespect among residents, their families and professional nursing staff. As just noted, the "hard to handle residents with dementia" item had a secondary load on this factor, likely reflecting dementia patients' disinhibition and inappropriate behavior. It was not, however, included in computation of the Respect composite. *Workload* (3 items, 4.4% total variance) reflects high resident-to-staff ratios and NAs' consequent lack of time to complete basic and resident-centered duties. *Exclusion* (4.0% variance) comprises 6 items that reflect NAs' feelings of being underutilized, under-supervised and excluded from organizational communication and decision-making. Note that the racial discrimination item loaded solidly on this factor as well, suggesting that NAs may attribute their exclusion at least in part to racial tension within the facility. A sixth and final factor, *New NAs*, accounting for 3.8% of total variance, is a couplet that taps dissatisfaction with having to deal with a continuing stream of new NAs because of turnover.

Internal consistency analyses confirmed the unidimensionality of the six scales: *Teamwork* $\alpha = .83$, *Job Stress* $\alpha = .84$, *Respect* $\alpha = .86$, *Workload* $\alpha = .71$, *Exclusion* $\alpha = .83$. For *New NAs*, the alpha of .68 fell just below the traditional limit of .70. However, we retained the two-item factor in subsequent analyses. Based on these coefficients, we computed composite scores for all factors, adjusting mean scores for up to 20% missing data to maintain the 5-point range of the original item pool.

Means for and correlations among the 6 NABs subscales appear as Table 3. Differences among means were tested with multiple paired t-tests; to adjust for multiple comparisons, only differences significant at $p < .005$ were considered interpretable. *Teamwork* and *Workload* were the highest rated barriers, differing significantly from all other factors but not from each other. *Respect*, the third highest rated barrier, differed significantly from *Exclusion* and *Job Stress*, but not from the *New NAs* composite. *New NAs*, in turn, was rated significantly higher than *Job Stress*, but did not differ from *Exclusion*. Most correlations were relatively strong, suggesting that respondents' perceptions tended to be unilaterally positive or negative. Indeed, Cronbach's α for all 30 items was .93, suggesting that subscales may be combined into an overall measure of perceived organizational barriers to job performance.

Personal and NH characteristics associated with perceived barriers

A series of multivariate analyses of variance explored the associations of the 6 barriers with sample characteristics displayed in Table 1. Sex, age, marital status, presence of children in the home, education, years in the current position and total years working in long-term care were not associated with the NABS subscales as a group.

Nursing home characteristics were more strongly associated with perceived barriers to job performance. A significant overall effect for NH size, Hotelling's $T = .228$, $F(18, 512) = 2.17$, $p < .004$, was driven by a single, very strong effect for the *Respect* subscale, $F(3, 177) = 5.97$, $p < .001$. This reflects a linear increase in perceived disrespect with increasing NH size, < 75 beds $M = 1.62$ ($SD = .56$); 76-125 beds $M = 1.76$ (.62); 125-175 beds $M = 2.14$ (.86); more than 175 beds $M = 2.24$ (1.18). Tukey b tests indicated that sites adjacent in the hierarchy were equivalent, but all 2- and 3-step size differences were significant at $p < .05$.

Geographic (urban/rural) location was also a significant overall predictor of perceived barriers, Hotelling's $T = .235$, $F(18, 494) = 2.15$, $p < .004$. Univariate F s were significant for *New NAs*, $F(3, 171) = 4.48$, $p < .005$; *Respect*, $F(3, 171) = 3.99$, $p < .009$, and *Exclusion*, $F(3, 171) = 3.07$, $p < .03$. Although Tukey b tests yielded no significant differences among means, the effect seems to be driven by generally greater perceived barriers among NAs working in urban settings as compared with their peers in suburbs, small towns or rural areas. This effect was most evident for *New NAs*, City $M = 2.23$, $SD = 1.13$ v. means of 1.66 to 1.74 for the other groups (SD s .71 to .93), and *Respect*, City $M = 2.21$, $SD = 1.02$, versus 1.72 to 2.02 (.67 to .96). A marginally significant effect for *Workload*, $F(3, 171) = 2.36$, $p < .075$, follows the same general pattern, City $M = 2.55$, $SD = .94$ vs. means of 1.95 to 2.23 for other groups (SD s .82 to .87). For *Exclusion*, NAs in rural settings scored equally as high ($M = 1.96$, $SD = .0$) as did city workers (1.99, .90). Here again, suburban (1.72, .86) and small town NAs (1.61, .62) reported fewer problems with being excluded from communication and clinical processes. Rural NAs also drove the marginal trend for *Teamwork*, $F(3, 171) = 2.56$, $p < .06$, in that they expressed somewhat greater problems than did other respondents ($M = 3.05$, $SD = .95$). Even here, though, city residents scored relatively high ($M = 2.60$, $SD = .91$) as compared with those in suburbs (2.42, .94) or small towns (2.33, .85).

We were concerned that the views of NAs who were hand-picked by NH administration to attend the national NAHCA conference might differ systematically from their peers who were not selected or could not attend the conference. As a preliminary test of this, we compared mean ratings of this sample with those of a small group ($N=14$) of NAs who were participating in a related project in a North Georgia nursing home. As Figure 1 indicates, the two groups were strikingly similar in both mean ratings and relative rank of each of the 6 barriers subscales.

Associations among barriers, empowerment and job satisfaction

A series of ordinary least squares regression analyses examined associations among the 6 NABS subscales, work-related empowerment and job satisfaction. In no given analysis did missing data exceed 6%; we therefore replaced missing items with the sample mean on an analysis-by-analysis basis. Because of the high correlations among NABS subscales, backward deletion of nonsignificant predictors was used to identify that subset of items that best predicted each outcome.

Regression of job satisfaction onto the 6 barriers composites revealed a strong association, initial $R = .765$, adjusted $R^2 = .572$, $F(6, 180) = 42.41$, $p < .001$. As Table 4 indicates, backward deletion yielded a final equation in which *Exclusion*, *Workload* and *Teamwork* were significant predictors and *New NAs*, a marginal contributor. For the composite PEI empowerment scale, an initially significant equation, $R = .433$, adjusted $R^2 = .161$, $F(6, 180) = 6.93$, $p < .001$, remained highly significant after deletion of all but 3 of the 6 barriers. *Job Stress* and *Exclusion* were strong negative predictors of empowerment. The marginal positive contribution of *Workload* is a reversal of its negative raw correlation ($r = -.139$), suggesting mild collinearity problems.

The rightmost 3 columns of Table 4 present regression results for each of the 3 PEI subscales. Results for the Autonomy subscale closely resembled those of the PEI as a whole, initial $R = .391$, adj. $R^2 = .125$, $F(6, 180) = 5.41$, $p < .001$. After backward deletion, only *Job Stress* and *Exclusion* remained significant predictors. The initial equation for Competence was only marginally significant, $R = .248$, adj. $R^2 = .030$, $F(6, 181) = 1.97$, $p = .072$. However, backward deletion yielded a significant final R driven primarily by *Job Stress*. Again, minor collinearity problems produced a positive β for *Teamwork* despite a negligible raw correlation with PEI Competence, $r = .029$. For the PEI Meaning scale, the initial multiple R of $.456$, adj. $R^2 = .182$, $F(6, 180) = 7.89$, $p < .001$, remained strong after backward deletion. *Respect* and *Teamwork* were strong negative predictors. The unique contribution of *Workload* was positive after controlling other barriers but, again, this belies its lack of univariate association, $r = -.003$.

A final stepwise regression analysis tested divergent validity of the NABS, in terms of its ability independently to explain unique variance in job satisfaction beyond that explained by empowerment. Results appear as Table 5. At Step 1, regression of job satisfaction onto the three empowerment subscales yielded a significant multiple R attributable primarily to Autonomy with a weaker contribution of Meaning. The PEI Competence subscale was not significant, $F < 1$. At Step 2, simultaneous entry of the 6 barriers composites significantly increased explained variance, $\Delta R^2 = .435$, $\Delta F(6, 178) = 34.55$, $p < .001$. Of the 6 barriers, only *Respect* did not contribute at least marginally to prediction of job satisfaction. *Exclusion* and *Workload* were the strongest predictors; *Job Stress* bore an unexpected positive association despite a raw correlation of $-.445$; *Teamwork* and *New NAs* were marginally significant factors. Backward deletion of nonsignificant variables (Table 5, Final step) yielded much the same result. The PEI Meaning and Competence composites, along with NABS *Respect*, were eliminated from the equation. This increased strength of *Teamwork* and reduced the positive β for *Job Stress*.

Discussion

Overall, this national sample of NAs rated common organizational problems as posing only moderate impediments to job performance. However, there was considerable variability in ratings: each barriers item spanned the full 1-to-5 scoring range. Of the 33 original items, 30 aggregated into 6 clear factors, each of which had good internal consistency. Although the

factor structure was strong, correlations among subscales were high, suggesting underlying individual differences in global perceived difficulty of doing a good job as a nursing assistant.

Lack of teamwork among NAs and heavy workload were clearly the most problematic of our 6 identified barriers for this national sample, followed in descending order by lack of respect from nursing staff, residents and their families; training of new staff; exclusion from routine processes and communication, and work-related stress. Confidence in the validity of this hierarchy is bolstered by replication of the pattern in a smaller sample of NAs from a single, small-town Georgia NH. Although the Georgia sample appeared to give slightly higher ratings to the Teamwork factor than did NAHCA conference attendees, the overall pattern of means as well as relative ratings for each subscale were remarkably similar. Again, teamwork and workload were primary concerns, and differences among mean ratings of the remaining 4 factors were relatively small. This strong parallel underscores not only the replicability of findings across samples, but also the centrality of team functioning and time pressure associated with a heavy workload to the NA's job.

Lack of association of basic demographic variables with perceived barriers to work performance was somewhat surprising, particularly in light of previous work emphasizing the effect of limited resources and multiple roles on direct care staff's experienced work stress³⁶. The failure of tenure in one's current job and in LTC generally to predict differences in ratings was also somewhat surprising, as our own work in progress [reference removed] suggests that perceived problems on the job differ markedly between veteran NAs and those new on the job. On the other hand, NH size and geographic location were significantly associated with perceived barriers, although in different ways. Urban/rural differences are especially interesting. As compared with their peers in suburbs and smaller towns, urban NAs reported generally greater problems with every barrier except *Job Stress*. Although underlying causes of this effect are not identifiable in this research, they are likely due at least partially to market factors. Specifically, greater availability of employment options in urban vs. rural areas may reduce inhibitions against absenteeism and quitting one's job, thus placing greater burden on longer tenured or more reliable NAs. A second factor may be the weaker sense of community that typifies urban residents^{37, 38}. However, this is contradicted by the fact that rural NAs rated lack of teamwork and exclusion as greater problems than did suburban and small town workers. Further work is needed to replicate and explicate this finding.

The six NABS subscales bore logically consistent but unique associations with job satisfaction and empowerment. The strong associations among NABS factors caused some problems in interpreting links with outcomes. However, collinearity problems were relatively minor, and basic relationships underlying obtained effects were generally quite clear. The strongest independent predictor of job satisfaction was perceived exclusion, a factor that included both having no input into care decisions as well as getting no feedback about one's own performance. Workload and poor teamwork among NAs were also significant predictors. Interestingly, our sample's ratings differ somewhat from findings of a recent national survey that used NAs' job satisfaction ratings to identify priority items for improving tenure³⁹. That research identified stress reduction as a top priority, followed by three issues that closely parallel our *Exclusion* factor: "management listens," "management cares," and "supervisor appreciates." In contrast, although our sample did emphasize exclusion, work stress was not a strong factor in their job satisfaction.

The very strong association between perceived barriers and job satisfaction (multiple $R = .76$) suggests considerable overlap between these constructs. This may be at least partly due to the job satisfaction measure we used, an NA-specific tool that included several items specifically tapping processes measured by the barriers tool, e.g., "the attention paid suggestions you make," "the pace or speed at which you have to work." More general measures of overall

satisfaction may prove to be less strongly associated with perceived barriers. This is an important point that should be addressed in future research to confirm divergent validity of the NABS vis-à-vis general job satisfaction. In a similar vein, it would be highly desirable to examine how perceived barriers to job performance relate to actual on-the-job behavior, as well as to absenteeism and turnover.

Barriers to job performance were generally less strongly related to empowerment than to job satisfaction. This is not particularly surprising, as empowerment is largely a subjective perception of oneself as a worker rather than an evaluation of the job one performs. Nonetheless, significant effects did emerge, and patterns of associations differed for the three PEI subscales. This substantiates the subscale structure of the NABS, in that the various barriers are differentially associated with NAs' perceived work competence, autonomy, and meaningfulness. Furthermore, in contrast to job satisfaction, emergence of these differential associations for empowerment cannot be attributed to direct overlap among barriers and empowerment composite items.

Finally, stepwise regression confirmed the divergent validity of NABS subscales vis-à-vis job empowerment, in that NABS subscales remained strong predictors of job satisfaction even when empowerment was controlled statistically. This is solid support for the conceptual differentiation of perceived barriers to performance from work-related empowerment. In fact, the various barriers composites were differentially associated with satisfaction versus empowerment. Overall, *Job Stress* was a stronger predictor of empowerment than satisfaction—so much so that the sign of the latter relationship was artifactually reversed when empowerment was included in the equation. In contrast, *Exclusion*, *Workload* and *Teamwork* are more strongly associated with job satisfaction than with overall empowerment.

Conclusion

Although associations are clearly complex, the concept of perceived barriers to job performance is a unique construct from those of work autonomy, competence and meaning (together comprising empowerment) and satisfaction with one's job. Nursing assistants clearly differentiate various barriers, citing workload and lack of teamwork as most problematic. Further work is clearly needed to establish the validity and reliability of the NABS as well as the role of perceived barriers in the actual job performance of NAs, their intent to stay on the job versus leave, patterns of absenteeism and turnover, and general psychological well-being.

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Figure 1.
Average barrier ratings for NAHCA conference attendees versus NAs at a single Georgia nursing home

Table 1

Demographic characteristics of NA survey participants

	N	(%)	M	(SD)	Range
Female	175	(94.6)			
Male	10	(5.4)			
Age in years			36.8	(12.30)	18 - 66
Married/partnered	101	(53.7)			
Single	53	(28.2)			
Widowed/divorced	34	(18.1)			
Children in home	90	(48.9)			
No children in home	94	(51.1)			
(Missing)	(4)				
Education completed					
Grades 1-11	20	(11.0)			
High school/GED	88	(48.4)			
Some college	66	(35.3)			
College degree	8	(4.4)			
(Missing)	(6)				
Current place of work					
Nursing home	180	(95.8)			
Assisted living	4	(2.1)			
Other	4	(2.1)			
Years in current position			6.82	(7.50)	0.25 - 38
Total years in long-term care			10.97	(9.17)	0.25 - 40
Size of facility (current job)					
Less than 75 beds	21	(26.6)			
75-125 beds	51	(27.1)			
126-175 beds	41	(21.8)			
More than 175 beds	45	(23.9)			
(Missing/not applicable)	1	(0.5)			
Geographic location					
City	61	(33.5)			
Suburb/large town	21	(11.5)			
Small town	90	(49.5)			
Rural	10	(5.5)			
(Missing)	(6)				

Table 2

Trimmed factor structure for 31 rated barriers to job performance

	Teamwork	Job stress	Respect	Factor Loadings		Exclusion	New NAs
				Workload			
Other NA are "slackers" who don't want to do their jobs	.850	.105	-.003	.148		-.057	-.030
NAs don't know how to work together to make the job easier	.661	-.166	-.140	-.007		.235	-.006
The NAs don't work together as a team	.621	-.062	-.053	-.174		.101	-.240
Other NAs call in sick at the last minute, making us short-staffed	.596	.257	.046	-.192		-.153	-.139
Not enough supplies to do my job	.406	.191	-.084	-.118		.338	.266
Problems at home get in the way of my doing a good job at work	.197	.765	-.031	-.012		-.093	.276
Having to deal with emotional upsetting situations	.057	.685	-.003	-.084		.143	.086
Things make me mad and I don't know how to handle that	-.042	.619	-.200	-.114		.080	.042
The work is the same, day after day	-.217	.584	-.089	.150		.153	-.251
New NAs don't know what to do and I don't have time to teach them	.082	.541	.181	-.149		.105	-.203
Residents resist being cared for	-.030	.523	-.347	-.008		-.057	-.041
It is hard to handle residents who have dementia	-.073	.447	-.436	-.226		-.229	-.064
The hard physical work causes problems for my health	.279	.401	-.273	-.137		-.195	-.084
Housekeeping staff don't do their jobs	.134	.398	.095	.202		.280	-.123
Residents are rude & disrespectful to NAs	-.037	.025	-.842	-.096		-.030	.122
Family members don't listen to what I have to say about the resident	-.145	.122	-.731	.071		.105	-.194
LPNs are rude & disrespectful to NAs	.256	-.099	-.656	-.106		.154	.021
RNs are rude & disrespectful to NAs	.381	-.214	-.579	-.057		.106	-.100
Residents' family members are rude & disrespectful	.053	.195	-.583	.132		.181	-.061
NAs are assigned too many residents to care for each day	.001	.025	-.189	-.701		.060	.067
There is not enough time to get the work done	.103	.068	-.043	-.660		.142	.000
There is not enough time to "visit" or chat with my residents	-.033	.302	.209	-.495		.246	-.280
I am not part of care planning for the residents I care for	-.098	-.044	-.098	-.294		.650	-.191
The job doesn't use my skills or knowledge	-.144	.204	-.164	.015		.646	-.005
My supervisor doesn't listen when I say there is something wrong with a resident	.087	-.068	-.129	-.156		.574	-.015
No one gives me feedback about my work or tells me if I am doing a good job	.323	.002	.052	-.085		.540	-.107
Racial discrimination	.189	.135	-.217	.392		.534	.197
The Director of Nursing doesn't care what I think	.143	.202	.047	-.340		.448	.110
Having to train new employees each month	.146	-.104	-.063	-.096		.017	-.795
New NAs have a bad attitude	.369	.194	-.155	.209		-.034	-.586

Table 3

Mean ratings and intercorrelations among Barriers subscales

	<u>Teamwork</u>	<u>Workload</u>	<u>Respect</u>	<u>New NAs</u>	<u>Exclusion</u>	<u>Job stress</u>
Teamwork	2.44 (.88) ^a					
Workload	.462	2.37 (.92) ^a				
Respect	.578	.439	1.91 (.87) ^b			
New NAs	.492	.376	.436	1.85 (.95) ^{bc}		
Exclusion	.708	.534	.643	.472	1.77 (.80) ^{cd}	
Job stress	.564	.510	.636	.476	.595	1.68 (.62) ^d

Note: Figures on the diagonals are means and (in parentheses) standard deviations; the remainder are Pearson product-moment coefficients. All correlations are significant at $p < .001$. Means with differing superscripts are significantly different at $p < .005$ or better (paired t -tests).

Table 4

Final regression models for association of perceived barriers to job performance with job satisfaction, work-related empowerment, and components of empowerment

Barrier	Job Satisfaction	Total Empowerment	PEI* Autonomy	PEI* Competence	PEI* Meaning
Teamwork	-.145 ^a	-.293 ^d		.152 ⁺	-.254 ^c
Job stress			-.217 ^b	-.258 ^c	
Respect		.146 ⁺			-.324 ^d
Workload	-.283 ^d	-.257 ^c	-.201 ^b		.251 ^d
Exclusion	-.401 ^d				
New NAs	-.101 ⁺				
Final R ²	.760	.424	.373	.228	.433
Adjusted R ²	.569	.166	.130	.042	.196
F	62.27 ^c	13.34 ^d	14.90 ^d	5.09 ^b	14.92 ^d
(df)	(4, 182)	(3, 183)	(2, 184)	(2, 185)	(3, 183)

Only statistically significant β s are shown.

* PEI = Psychological Empowerment Inventory

^a $p < .05$

^b $p < .01$

^c $p < .005$

^d $p < .001$

⁺ $.05 > p > .10$

Table 5

Stepwise regression of Empowerment and Barriers subscales onto job satisfaction

	<u>Step 1</u> <u>β</u>	<u>Step 2</u> <u>β</u>	<u>Final step</u> <u>β</u>
<u>Empowerment</u>			
Autonomy	.382 ^d	.185 ^d	.205 ^d
Meaning	.164 ^a		
Competence			
<u>Barriers</u>			
Teamwork		-.123 ⁺	-.139 ^a
Job stress		.174 ^b	.125 ^a
Respect			
Workload		-.336 ^d	-.320 ^d
Exclusion		-.360 ^d	-.394 ^d
New NAs		-.094 ⁺	-.095 ⁺
R	.439	.792	.786
Adjusted R ²	.179	.608	.608
F	14.61 ^d	33.23 ^d	49.68
(df)	(3, 184)	(9, 179)	(6, 181)

Only statistically significant βs are shown.

^a
 $p < .05$
^b
 $p < .01$
^c
 $p < .005$
^d
 $p < .001$
⁺
 $.05 > p > .10$