

The Influence of Care Provider Access to Structural Empowerment on Individualized Care in Long-Term-Care Facilities

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Objectives. Implementing management initiatives that enable formal caregivers to provide quality, individualized care to older adults in long-term-care (LTC) facilities is increasingly important given that the number of LTC residents is projected to triple by 2031. The objective of this study was to explore the relationship between care provider access to structural empowerment and the provision of individualized care in LTC.

Methods. We computed structural equation models separately for registered nurses and licensed practical nurses ($n = 242$) and care aides ($n = 326$) to examine the relationship between access to empowerment structures (i.e., informal power, formal power, information, support, resources, opportunity) and the provision of individualized care. We subsequently undertook invariance analyses to determine if the association between empowerment structures and reported provision of individualized care differed between caregiver groups.

Results. Access to structural empowerment had a statistically significant, positive association with provision of individualized care for both groups. For registered nurses/licensed practical nurses and care aides, empowerment explained 50% and 45% of observed variance in individualized care, respectively. These notable percentages did not differ significantly between caregiver groups.

Discussion. Of the empowerment structures, support, especially in the form of access to educational opportunities and recognition for a job well done, seems to be particularly significant to care providers. Findings from this study suggest that provision of individualized care in LTC may be enhanced when formal caregivers have appreciable access to empowerment structures.

Key Words: Organizational behavior—Quality improvement—Residential care.

HISTORICALLY, the medical model has defined and determined the provision of care in long-term-care (LTC) settings (Crow, 2004). As a result, care has primarily been provider driven (i.e., organized on the basis of care provider routines with a primary focus on achieving medical goals). Recently, however, attempts have been made to foster a paradigm shift toward social models of care that strive to individualize resident care. This interdisciplinary approach acknowledges residents as unique, autonomous persons (Chappell, Reid, & Gish, 2006) and attempts to include residents in care planning and delivery (Happ, Williams, Strumpf, & Burger, 1996). In accord with this zeitgeist, individualized care is achieved in caring relationships as part of a holistic approach to wellness. Unfortunately, however, research to date has indicated that meaningful improvements in the provision of individualized care have yet to be realized (Anderson, Issel, & McDaniel, 2003; Barry, Brannon, & Mor, 2005; Coleman et al., 2002; Ransom, 2000; Stone, 2001; Stone et al., 2002).

The traditional hierarchical medical model in LTC ensures that staff with the highest education, salary, and position remain furthest from direct contact with residents. As a result, those in LTC with the least resident contact have the most control in determining care decisions. Conversely, care aides provide between 80% and 90% of all resident care yet receive the least amount of training, receive the lowest pay in health care, and

are rarely consulted when care decisions are made or implemented (Blair & Glaister, 2005; Kane, 1994; Stone, 2001; Stone & Yamada, 1998). Stone and Yamada contended that care aides typically have considerable responsibilities yet lack both authority and autonomy within LTC. Kane (p. 71) reiterated this conclusion, stating that care aides “have at least one thing in common with their clientele: perceived and actual lack of power.” This is especially problematic because care aides possess the greatest ability to enable or impede resident autonomy. As a result, efforts to individualize resident care must take the needs of care aides into account.

When asked what they most need and want, care aides consistently state that they want to be respected, to be recognized and rewarded for providing high-quality care, and to be included in the care planning and care conferences (Deutschman, 2001; McGilton, 2002). From the perspective of Kanter's (1979) theory of empowerment, it seems clear that each of these requests is directly related to a lack of access to *empowerment structures* (i.e., access to informal power, formal power, information, support, resources, and opportunity structures).

According to Kanter (1979), a subordinate's ability to access empowerment structures within an organization is largely dependent upon his or her supervisor's ability to access empowerment structures. Within LTC, care aides are most often directly supervised by registered nurses (RNs) or licensed practical nurses (LPNs) as part of defined care teams.

Consequently, as the immediate managers of the care aides, RNs and LPNs both directly and indirectly influence the provision of individualized care.

According to Kanter (1979), attitudes and behaviors are shaped primarily in response to one's position within an organization. A defining feature of an individual's position in the organization is the amount of access he or she has to both formal and informal power. *Formal power* is derived from positions that are relevant to key organizational goals, allow discretion in work performance and provide recognition, whereas *informal power* is derived from the quality of alliances and relationships with people in the organization. Furthermore, people with formal and informal power are in positions that facilitate access to organizational empowerment structures enabling them to accomplish their work-related goals (Brown & Kanter, 1982; Kanter, 1979).

Kanter described three empowerment structures—the structure of opportunity, the structure of proportions, and the structure of power. The *structure of opportunity* refers to access to new challenges, opportunities to increase knowledge and skills, and opportunities for growth and advancement within the organization. The *structure of proportions* refers to the social composition of people in approximately the same position—individuals who are an extreme minority are said to have token status and therefore lack access to sources of power (Fairhurst & Snavely, 1980; Izraeli, 1983). The *structure of power* within organizations refers to access to three lines of power—lines of supply, lines of information, and lines of support. *Lines of supply* refer to the ability to exert influence outward and thus bring needed and valued resources into the organizational domain. *Lines of information* pertain to timely access to information about organizational decisions and policy changes that may directly or indirectly affect one's organizational domain. *Lines of support* refer to guidance and feedback received from subordinates, peers and supervisors to enhance effectiveness (Kanter, 1979; Laschinger, 1996).

According to Kanter (1979), having access to information, support, resources, and opportunity structures in an organization empowers individuals to contribute constructively and effectively to the attainment of organizational goals. Furthermore, individuals who have access to these structures motivate and empower others by sharing these sources of power.

When these concepts are applied to LTC, the likely relationship between access to empowerment structures and formal caregivers' ability to provide individualized care becomes apparent. For instance, provision of individualized care may be directly related to access to formal power; this is because care staff are unable to individualize resident care unless they can exercise some level of job discretion. An example of this is when care staff are empowered to adapt care provision to meet resident preferences as opposed to rigidly following nursing routines (e.g., enable the resident to have a shower rather than a bath, enable the resident to have breakfast in bed, enable the resident to have an evening bath rather than a morning bath). Additionally, access to lines of supply (e.g., care staff having sufficient time to provide high-quality, individualized care), access to lines of information (e.g., knowing and concurring with the values and the goals of senior management), and access to lines of support (e.g., access to further training or education) may also influence care staff's ability to provide

individualized care. Finally, access to informal power (e.g., encouraging immediate supervisors to ask for their opinion) may also be directly associated with the care staff's ability to provide individualized care.

This assertion is consistent with Rader and Semradek (2003), who concluded that the best way to ensure that frontline caregivers respect residents' rights and listen to their preferences is for managers to ensure that frontline caregivers are respected and that their decision-making roles are supported. Tellis-Nayak (2007) reiterated these assertions, finding that supportive managers who create person-centered workplaces enable caregivers to actively increase the provision of person-centered care they provide, thereby increasing residents' quality of life.

Alternatively, individuals in organizations who lack access to these structures see themselves as accountable without power. This, in turn, creates feelings of frustration and failure, leading them to attempt to decrease others' power by exerting dictatorial control over individuals below them in the organizational hierarchy. Sheridan, White, and Fairchild (1992) supported this assertion when they found that when administrators fail to attend to caregivers' needs, they passively foster cold and impersonal feelings and interactions between caregivers and residents. Furthermore, because the care aides are below the RNs and LPNs within LTC organizational hierarchies, the potential exists for RNs and LPNs to exert a similar influence on the care aides as well as the residents. This difference within the LTC hierarchy also makes it reasonable to assert that the relationship between access to empowerment structures and the provision of individualized care may be different for RNs/LPNs than for care aides.

According to Kanter (1979), attitudes and behaviors are largely shaped in response to one's position within an organization; as a result, individual differences such as personality traits are considered to be of less influence than one's position. Consequently, Kanter's theory provides a theoretical basis for the assumption that environmental factors largely determine perceptions of, and reaction to, access to empowerment. Furthermore, Kanter has proposed that the best way to enable individuals to function effectively in their roles is by making structural changes that enable access to empowerment structures (e.g., access to resources, access to senior management, increased control over working conditions and flexibility). She concluded by stating that the processes of getting and giving power are inextricably intertwined and that the most effective way to expand power is to share it.

The existing literature regarding nurse empowerment generally supports Kanter's theory and suggests that access to empowerment structures related to power and opportunity in one's position is significantly related to organizational commitment, job satisfaction, burnout, job autonomy, work effectiveness, participation in organizational decision making and self-efficacy (Beaulieu, Shamian, Donner, & Pringle, 1997; Dee & Poster, 1995; Laschinger, 1996; Laschinger & Finegan, 2005; Laschinger, Finegan, & Shamian, 2001; Laschinger, Finegan, Shamian, & Wilk, 2001; Laschinger & Sabiston, 2000; Laschinger, Sabiston, & Kutzscher, 1997; Laschinger & Wong, 1999; McDermott, Laschinger, & Shamian, 1996; Wilson & Laschinger, 1994).

Absent from this literature, however, are studies undertaken to further understanding of the potential relationship between

RN, LPN and care aide access to empowerment structures in LTC vis-à-vis provision of individualized care. Therefore, we developed and tested a priori models hypothesizing a direct and significant relationship between care provider access to structural empowerment and provision of individualized care (computed separately for RNs/LPNs and care aides). These models consist of six key components of Kanter's (1979) theory of structural empowerment (i.e., opportunity, resources, support, information, formal power, and informal power) and four key components of individualized care (i.e., knowledge of the resident, resident autonomy, staff-to-staff communication, and staff to resident communication).

Based on these a priori models, we hypothesized the following: (a) RN/LPN access to structural empowerment would have a statistically significant and direct positive effect on the provision of individualized care as reported by RNs/LPNs; (b) care aide access to structural empowerment would have a statistically significant and direct positive effect on the provision of individualized care as reported by care aides; and (c) based on the knowledge that the majority of resident care is provided by care aides, the strength of association between access to structural empowerment and provision of individualized care would be greater for care aides than for RNs/LPNs.

METHODS

We used structural equation modeling (SEM) to test our research questions. This analytic procedure enables the simultaneous examination of association between multiple dependent and independent variables; furthermore, SEM allows for analysis of both observed and unobserved variables (represented within SEM as rectangles and ovals, respectively). Because latent or unobserved variables cannot be measured directly, they are inferred as a function of the covariance among observed constructs (Ullman, 2006). We addressed the final research question by means of invariance analyses, in which we compared the patterns of association between RN/LPN and care aide SEM models following the procedures described by Byrne (2004).

Participants

We recruited convenience samples of 242 RNs/LPNs and 326 care aides from LTC facilities within three of five health authorities (or regions) in British Columbia, Canada (54 facilities in total). We recruited participants over a 6-month period from January 2007 through May 2007. To be eligible, participants had to work on a permanent full-time or part-time basis (or as a casual in an equivalent full-time or part-time position), be proficient in English and have been employed in that facility for at least 6 months. Our efforts were intended to recruit large, not necessarily representative, samples of formal caregivers.

We categorized participants into two separate groups. The first ($n = 242$) comprised 177 RNs and 65 LPNs. We examined RNs and LPNs together based on two initiatives recently implemented in British Columbia, both of which due to RN shortages in this province. The first was the Ministry of Health's initiative enabling LPNs to function in a capacity that is considered "full scope of practice" (Harvey, Sams, Bosancic, & Brunke, 2003). The second was the implementation of strategies developed to replace the majority of RNs working in LTC facilities with LPNs (Greenlaw, 2003). Both initiatives had been fully imple-

Table 1. Descriptive Characteristics of RNs/LPNs ($n = 242$)

Variable	Value
Gender, n (%)	
Male	14 (5.8)
Female	228 (94.2)
Age (years), $M \pm SD$ (range)	45.3 \pm 10.7 (19–65)
Ethnicity, n (%) ^a	
Aboriginal/First Nations	2 (0.8)
African/Black	2 (0.8)
Asian/Pacific Islander	86 (35.5)
Latina/Latino	2 (0.8)
Middle Eastern/North African	2 (0.8)
Caucasian/White/European	134 (55.4)
Mixed/multi	4 (1.7)
Job title, n (%)	
RN	177 (73.1)
LPN	65 (26.9)
Years experience in nursing, $M \pm SD$ (range)	18.9 \pm 11.6 (1–44)
Years in current facility, $M \pm SD$ (range)	8.7 \pm 7.5 (1–32)
Highest level of education, n (%)	
Certificate	9 (3.7)
Diploma	175 (72.6)
BScN	56 (23.1)
MSN	1 (0.4)
Work status, n (%)	
Full time	139 (57.4)
Part time	71 (29.3)
Casual (full- or part-time equivalent)	31 (12.8)

Notes: RN = registered nurse; LPN = licensed practical nurse.

^a $n = 232$.

mented by the time we recruited participants for this study; as a result, LPNs and RNs now have many similar roles and responsibilities within LTC (i.e., team leaders and supervision of care aides). We acknowledge, however, that differences in skill and experience may persist. Consequently, we computed preliminary analyses to identify possible differences in empowerment and individualized care between RNs and LPNs. There was a statistically significant overall difference between RNs and LPNs, $F(10, 230) = 2.40, p < .05$; however, univariate analyses indicated that of 10 dependent variables, only informal power attained statistical significance. Response levels indicated that RNs reported higher levels of access to informal power ($M = 61.67, SD = 11.28$) than LPNs ($M = 54.87, SD = 11.72$), $F(1, 239) = 14.48, p < .01$. Based on these findings and the initiatives previously described, we combined RNs' and LPNs' responses for subsequent analyses.

As shown in Table 1, the average age of participants in this group was 45.3 years ($SD = 10.67$, range = 19–65). They had an average of 18.9 years of work experience ($SD = 11.60$, range = 1–44) and an average of 8.8 years experience within the facilities in which they currently worked ($SD = 7.55$, range = 1–32). The majority identified themselves as Caucasian/White/European (55.4%), though we also recruited a notable proportion of Asians/Pacific Islanders (35.5%) consistent with the overall population of British Columbia.

The second group comprised 326 care aides. As shown in Table 2, the average age of these participants was 42.8 years ($SD = 9.15$, range = 22–64). They had 12.5 years of work

Table 2. Descriptive Characteristics of Care Aides ($n = 326$)

Variable	Value
Gender, n (%)	
Male	25 (7.7)
Female	299 (91.7)
Age (years), $M \pm SD$ (range)	42.8 \pm 9.1 (22–64)
Ethnicity, n (%) ^a	
Aboriginal/First Nations	6 (1.8)
African/Black	4 (1.2)
Asian/Pacific Islander	128 (39.3)
Latina/Latino	13 (4)
Middle Eastern/North African	6 (1.8)
Caucasian/White/European	138 (42.3)
Mixed/multi	10 (3.1)
Years experience in nursing, $M \pm SD$ (range)	12.4 \pm 7.8 (1–40)
Years in current facility, $M \pm SD$ (range)	9.7 \pm 7.0 (1–29)
Highest level of education, n (%)	
High school	37 (11.3)
Certificate	236 (72.4)
Diploma	30 (9.2)
BScN	3 (0.9)
Work status, n (%) ^b	
Full time	163 (50)
Part time	93 (28.5)
Casual (full- or part-time equivalent)	61 (18.7)

Notes: ^a $n = 305$.

^b $n = 317$.

experience on average ($SD = 7.89$, range = 1–40) and an average of 9.7 years within the facility in which they currently worked ($SD = 7.02$, range = 1–29). Just under half identified themselves as Caucasian/White/European (42.3%) with a similar proportion identifying themselves as Asian/Pacific Islanders (39.3%).

Participating Facilities

In total, we collected data from participants working in 54 facilities within three of five British Columbia Health Authorities. Surveys were completed by respondents who worked in facilities whose managers had agreed to allow their staff to be approached to participate ($n = 31$) and at educational sessions from participants working in facilities whose managers either did not respond or had refused to enable participation ($n = 23$). The most common reason for refusal was a lack of time or resources.

To ascertain the degree to which differences might exist between consenting and nonconsenting facilities, we asked all administrators to provide descriptive facility information even when we were not invited to collect data onsite. (Seven administrators were unwilling to provide descriptive facility information.) Of note, there were no statistically significant differences between consenting and nonconsenting facilities in terms of the following: (a) day shift staffing ratios for RNs, $F(2, 49) = 2.70$; LPNs, $F(2, 49) = 0.80$; and care aides, $F(2, 48) = 0.82$; or (b) night shift staffing ratios for RNs, $F(2, 49) = 1.96$; LPNs, $F(2, 49) = 1.95$; and care aides, $F(2, 48) = 0.83$.

We also compared responses to study variables between participants recruited within consenting facilities and those who provided data at educational sessions. We did this to ascertain the degree to which facility administrators might have affected

derived data. Of note, there were no significant response differences between RNs/LPNs and care aides working in consenting facilities and nonconsenting facilities for both empowerment ($t[220] = .73$, *ns*, $t[320] = 1.15$, *ns*, respectively) and individualized care ($t[223] = 1.88$, *ns*, $t[324] = .92$, *ns*, respectively). These findings suggest that neither facility features nor levels of empowerment or individualized care differed as a result of administrators' willingness to enable data collection onsite. In other words, administrators did not appear to skew responses, providing greater confidence in participant data.

The majority of participants worked in facilities located in urban settings (75.5%), whereas 23.8% worked in rural areas. Also, the majority worked in public, not-for-profit facilities (52.3%); a notable proportion worked in private, for-profit facilities (28.5%), whereas a smaller proportion worked in private, not-for-profit facilities (18.8%). The average number of residents in participating facilities was 155 ($SD = 84.07$, range = 29–700). The vast majority of participants worked in unionized environments (80.8%) and in facilities providing complex care (90.0%). Finally, 40.5% of the participants worked in facilities with special care units (i.e., dementia care).

Instruments

Structural empowerment.—We selected Laschinger's (1996) Conditions of Work Effectiveness Questionnaire (CWEQ), the Job Activities Scale (JAS), and the Organizational Relationships Scale (ORS) to measure seven constructs specific to Kanter's theory of structural empowerment in organizations. We computed a total empowerment score by summing responses to each of the subscales from the CWEQ, JAS, and ORS.

The CWEQ uses a 5-point Likert-type response key and consists of four subscales: information—8 items; support—9 items; resources—7 items; opportunity—7 items. Numerous studies in health care settings have used the CWEQ. Generally acceptable internal consistency for responses to each subscale have been reported ranging from $.73 \leq \alpha \leq .98$ for information, $.73 \leq \alpha \leq .92$ for support, $.66 \leq \alpha \leq .91$ for resources, and $.73 \leq \alpha \leq .91$ for opportunity (Laschinger, 1996).

The JAS is a 9-item instrument (5-point Likert-type response key) that measures staff perceptions of formal power within work environments. Content validity was established with the aid of an expert panel. Acceptable internal consistency of responses to the JAS has been reported ranging from $.69 \leq \alpha \leq .79$ (Laschinger, 1996).

The ORS is an 18-item instrument (5-point Likert-type response key) that measures staff perceptions of informal power within organizations. Support for the face validity of ORS responses was obtained through pilot testing with a convenience sample of RNs. Reported internal consistency of responses to the ORS scales is within optional parameters (i.e., $.83 \leq \alpha \leq .89$).

Individualized care.—The Individualized Care Instrument (ICI) developed by Chappell and colleagues was established through a review of the literature, direct observation of care within LTC facilities and ongoing consultation with an expert panel (Chappell et al., 2006). This 34-item scale (4-point Likert-type response key) measures four domains of individualized care: knowing the resident, resident autonomy and mastery, staff-to-staff communication and staff-to-resident

Table 3. Descriptive Features and Psychometric Properties of Model Variables for Registered Nurses/Licensed Practical Nurses ($n = 242$)

Instrument	<i>M</i>	<i>SD</i>	Range	α	Kurtosis	Skewness
JAS: Formal Power	27.85	5.07	15–42	.76	0.46	0.24
ORS: Informal Power	59.47	11.69	25–88	.91	–0.34	0.06
CWEQ: Opportunity	23.80	4.70	10–35	.78	0.19	0.02
CWEQ: Information	24.01	6.57	8–40	.88	–0.41	–0.10
CWEQ: Support	27.67	6.56	11–45	.88	–0.36	0.03
CWEQ: Resources	20.71	4.49	9–32	.84	–0.22	0.10
Total empowerment	183.43	30.50	91–268	.95	0.21	0.33
IC: Know Residents	34.99	4.55	22–44	.74	–0.45	–0.07
IC: Autonomy	34.97	6.02	18–55	.81	0.02	0.07
IC: Staff/Staff Communication	31.17	4.53	16–40	.82	0.25	–0.35
IC: Staff/Resident Communication	8.41	1.80	4–12	.68	–0.45	0.16

Note: JAS = Job Activities Scale; ORS = Organizational Relationships Scale; CWEQ = Conditions of Work Effectiveness Questionnaire; IC = Individualized Care Instrument.

communication. Although not a direct aspect of care delivery, staff-to-staff communication is an integral component of individualized care because it fosters knowledge of resident needs and preferences within care teams, with supervisory staff and between shifts. The ICI consists of four subscales: Know Residents (IC-KNOW, 11 items), Resident Autonomy (IC-AUTONOMY, 11 items), Staff-to-Staff Communication (IC-COMMUNICATION, 10 items), and Staff-to-Resident Communication (IC-COMMUNICATION-SR, 3 items). Reported internal consistency of responses is within acceptable range for IC-KNOW ($\alpha = .77$), IC-AUTONOMY ($\alpha = .80$), and IC-COMMUNICATION ($\alpha = .84$). Somewhat suboptimal alpha coefficients have been reported for IC-COMMUNICATION-SR ($\alpha = .67$). This may well be due to the small number of items within this subscale (i.e., three items). As noted by O'Rourke, Hatcher, and Stepanski (2005), internal consistency of responses can be underestimated when scales have fewer than eight items. Although we readily acknowledge that each of these instruments requires further validation, they are currently the only measures of individualized care with acceptable reliability estimates.

RESULTS

Descriptive Information

Tables 3 and 4 report means, ranges of responses, standard deviations, alpha coefficients, and kurtosis and skewness values

for each of the 10 observed variables as well as the total empowerment score (i.e., the sum of the six structural empowerment subscales) for RNs/LPNs and care aides, respectively. Of note is the high internal consistency of responses by care aides for all scales. This suggests that although the empowerment scales were not developed specifically for use with care aides, they appear to accurately interpret and respond to these questions. Cronbach's alpha values were, in fact, higher for care aides than RNs/LPNs for 8 of 10 scales. Table 5 reports correlation coefficients between study variables.

We counterbalanced the order of presentation of questionnaires, creating two alternate formats. Comparative analyses indicated that response levels did not significantly differ between forms (Bonferroni-adjusted alpha level of .007 to reduce the likelihood of capitalization on chance); it is thus unlikely that order effects confounded participant responses.

Assessment of Between-Group Mean Response Levels

We first computed between-group analyses to compare response levels between RNs/LPNs and care aides. There was an overall statistically significant difference in reported empowerment, $F(6, 588) = 40.90$, $p < .01$, $\lambda = .69$, partial $\eta^2 = .30$. RNs/LPNs reported marginally higher levels of formal power ($M = 27.83$, $SD = 5.07$) than care aides ($M = 26.40$, $SD = 6.49$), higher levels of informal power ($M = 59.47$, $SD = 11.71$) as compared to care aides ($M = 45.42$, $SD = 13.02$), and

Table 4. Descriptive Features and Psychometric Properties of Model Variables for Care Aides ($n = 326$)

Instrument	<i>M</i>	<i>SD</i>	Range	α	Kurtosis	Skewness
JAS: Formal Power	26.45	6.53	10–45	.84	0.27	0.24
ORS: Informal Power	45.39	12.99	18–90	.92	0.04	0.32
CWEQ: Opportunity	22.89	5.73	8–35	.85	–0.16	0.04
CWEQ: Information	23.84	7.35	8–40	.90	–0.60	0.05
CWEQ: Support	27.01	8.01	9–45	.90	–0.38	0.08
CWEQ: Resources	20.93	5.59	8–35	.88	–0.29	0.11
Total empowerment	166.38	37.86	75–283	.96	–0.07	0.25
IC: Know Residents	34.15	5.05	16–44	.74	–0.05	–0.18
IC: Autonomy	34.99	6.36	18–54	.77	0.02	0.11
IC: Staff/Staff Communication	31.10	5.47	13–40	.86	–0.44	–0.34
IC: Staff/Resident Communication	9.22	2.02	3–12	.74	–0.35	–0.37

Note: JAS = Job Activities Scale; ORS = Organizational Relationships Scale; CWEQ = Conditions of Work Effectiveness Questionnaire; IC = Individualized Care Instrument.

Table 5. Correlation Coefficients Between Measures of Empowerment and Individualized Care ($n = 568$)

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Opportunity	—										
2. Information	.67	—									
3. Support	.66	.74	—								
4. Resources	.45	.57	.70	—							
5. Formal power	.61	.65	.69	.60	—						
6. Informal power	.41	.42	.47	.38	.55	—					
7. Total empowerment	.75	.81	.85	.72	.83	.80	—				
8. Know residents	.22	.28	.29	.24	.27	.30*	.35	—			
9. Resident autonomy	.36	.46	.54	.54	.43	.30	.53	.50	—		
10. Staff/staff communication	.36	.36	.39	.34	.41	.37	.47	.44	.41	—	
11. Staff/resident communication	.18	.19	.17	.17	.21	.10	.19	.35	.27	.46	—

Note: All coefficients statistically significant ($p < .01$).

moderately higher levels of total empowerment ($M = 183.43$, $SD = 30.50$) as compared to care aides ($M = 166.38$, $SD = 37.86$).

Additionally, there was an overall statistically significant difference between RNs/LPNs and care aides on the individualized care scales, $F(4, 563) = 11.26$, $p < .01$, $\lambda = .92$, partial $\eta^2 = .07$. Post hoc analyses indicate that the only difference to attain univariate significance (Bonferroni-adjusted $\alpha = .01$) was IC-COMMUNICATION-SR, $F(1, 566) = 24.55$, $p < .01$, $\lambda = .91$, partial $\eta^2 = .04$. An examination of scores indicated that care aides reported somewhat higher levels on the IC-COMMUNICATION-SR ($M = 9.22$, $SD = 2.02$) than RNs/LPNs ($M = 8.41$, $SD = 1.08$).

Proposition Testing

We hypothesized that RN/LPN access to structural empowerment would have a statistically significant and direct positive

effect upon reported provision of individualized care. We computed a baseline model to ascertain if observed variables contributed significantly to measurement of their respective latent constructs. All parameter estimates were in the positive direction and statistically differed from zero (i.e., t values > 1.96). Modification indices suggested that no observed variable cross-loaded across latent constructs (see Figure 1).

More precisely, each observed variable (i.e., opportunity, support, resources, information, formal power, informal power) provided unique and significant contribution to measurement of the latent variable labeled *RN/LPN Empowerment*. For these RNs/LPNs, support provides the largest contribution to measurement of structural empowerment. Additionally, each observed variable (i.e., know resident, resident autonomy, communication staff-to-staff, communication staff-to-resident) provided unique and significant contribution to measurement of the latent variable labeled *individualized care*.

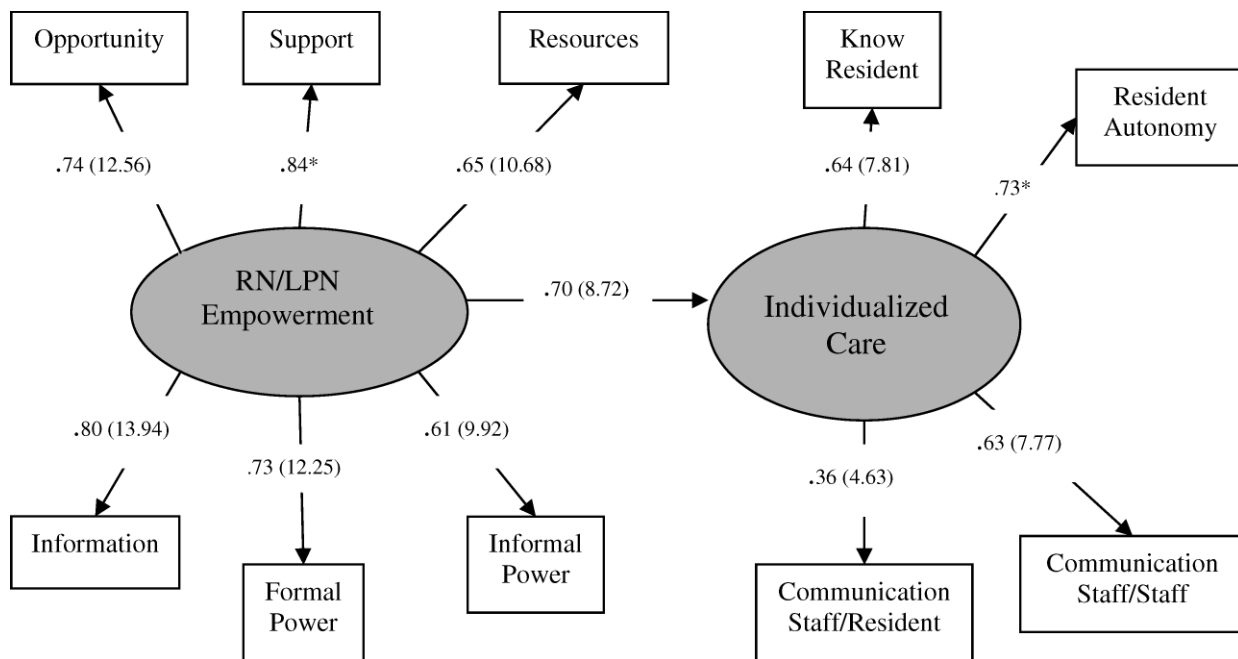


Figure 1. Model of influence of RN/LPN access to structural empowerment on individualized care. Parameters are expressed as maximum likelihood estimates (standardized solution). Asterisks denote parameters initially fixed to 1.0 for scaling and statistical identification; thus, significance levels could not be computed for these items. Numbers in parentheses indicate significance levels (statistically significant t values > 1.96). RN = registered nurse; LPN = licensed practical nurse.

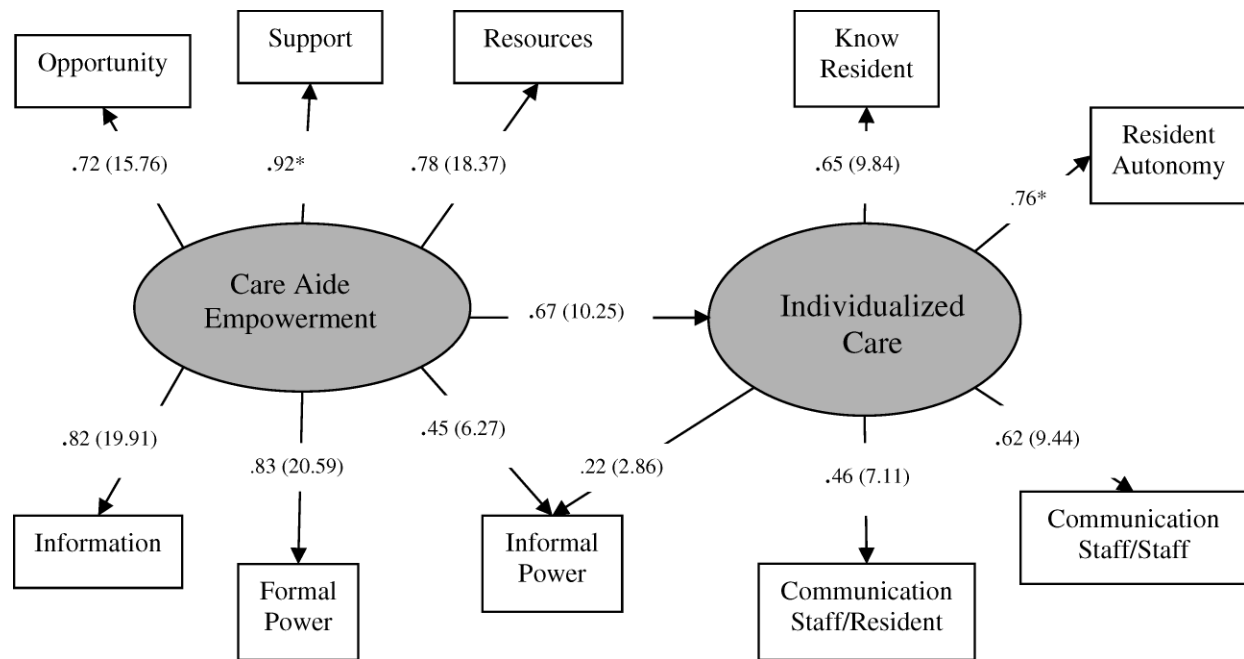


Figure 2. Model of influence of care aide access to structural empowerment on individualized care. Parameters are expressed as maximum likelihood estimates (standardized solution). Asterisks denote parameters initially fixed to 1.0 for scaling and statistical identification; thus, significance levels could not be computed for these items. Numbers in parentheses indicate significance levels (statistically significant t values $> |1.96|$).

Access to structural empowerment had a statistically significant and positive direct effect on reported provision of individualized care; this parameter estimate (squared) suggests that 50% of the variance in RNs/LPNs' ability to provide individualized care can be explained by their reported access to structural empowerment. Therefore, it would appear that the goal of improving the provision of individualized care in LTC facilities may be more fully achieved by enhancing RNs/LPNs' access to empowerment structures.

In addition to these strong parameter estimates, various indices suggest overall good model fit subsequent for correction for correlation between 3 of 66 error term pairings, $\chi^2(df = 31) = 68.28$ (statistical power = .70 for this model according to the formula provided by MacCallum, Browne and Sugawara, 1996). Of further note, the Comparative Fit Index (CFI) for the RN/LPN model exceeds the threshold value of 0.95 (Bentler, 1990) suggesting good fit (i.e., CFI = .96). The Adjusted Goodness of Fit Index for this model (AGFI = .90) equals threshold value of .90 for optimal fit (Bryne, 1998). In addition, the Root Mean Square Error of Approximation (RMSEA) was less than 0.09 (RMSEA = .071; $0.048 < RMSEA CL_{90}$ [90% confidence interval] $< .093$), suggesting adequate error of approximation (MacCallum et al., 1996).

The correlation coefficient comparing parameter estimates for the initial and final RN/LPN models ($r = .99$) indicates near-perfect correlation between the initial and final parameter values; this coefficient suggests that correction for correlated error had a negligible effect upon parameter estimates.

We next computed this a priori model for care aides. Similar to RNs/LPNs, findings support the assertion that structural empowerment has a statistically significant and direct positive

association with reported provision of individualized care. All parameter estimates statistically differed from zero (i.e., t values > 1.96) prior and subsequent to correction for correlated error between four pairs of error terms. Each observed variable (i.e., opportunity, support, resources, information, formal power, informal power) provided unique and significant contribution to measurement of the latent variable labeled *Care Aide Empowerment*. Similar to the RN/LPN model, support provides the greatest contribution to measurement of care aides' access to structural empowerment.

Of note, modification indices indicated that informal power loaded across latent variables. In other words, informal power contributes significantly to the measurement of both empowerment among care aides as well as individualized care (see Figure 2). According to Kanter (1979), informal power is derived from the quality of alliances and relationships with people in the organization. This finding suggests that the quality of work relationships may have a direct and meaningful influence on care aides' ability to provide individualized care in contrast to the singular function of informal power among RNs/LPNs (as hypothesized). Each observed variable (i.e., know resident, resident autonomy, staff-to-staff communication, and staff-to-resident communication) also provided unique and significant contribution to measurement of the latent variable labeled *individualized care*.

Finally, access to structural empowerment had a statistically significant and direct positive effect on reported provision of individualized care. This parameter estimate (squared) suggested that 45% of the observed variance in care aides' reported ability to provide individualized care may be explained by their access to structural empowerment. Again, this result suggests

Table 6. Summary of Specifications and Fit Statistics for Invariance Analyses

Successive Constraints Applied	χ^2	<i>df</i>	$\Delta\chi^2$	Δdf	CFI	AGFI	RMSEA (RMSEA CL ₉₀)
Unconstrained structural model	163.13	60			.96	.90	.055 (.045–.065)
Empowerment constrained upon individualized care	165.51	61	2.38	1	.96	.90	.055 (.045–.065)
Individualized care variables constrained upon latent variable	166.64	64	1.13	3	.96	.91	.053 (.043–.063)
Empowerment variables							
Opportunity	167.99	65	1.35	1	.96	.91	.053 (.043–.063)
Information	170.06	66	2.07	1	.96	.91	.053 (.045–.063)
Resources	174.25	67	4.19*	1	.96	.91	.053 (.044–.063)
Formal power	176.80	68	2.55	1	.96	.91	.053 (.044–.063)

Notes: CFI = comparative fit index; AGFI = adjusted goodness-of-fit index; RMSEA = root mean square error of approximation; RMSEA CL₉₀ = 90% confidence intervals for RMSEA values.

* $p < .05$.

that if administrators want to enhance individualized care, a primary focus should be on enabling care aides to access empowerment structures.

Goodness of fit indices also support the measurement properties of the care aide model, $\chi^2(df = 29) = 94.85$, power = .81. For instance, the Comparative Fit Index exceeded .95 (Bentler, 1990) suggesting optimal fit (i.e., CFI = .96). Once again, the Adjusted Goodness-of-Fit Index equals the optimal threshold value of .90 (Bryne, 1998), and the Root Mean Square Error of Approximation is less than 0.09 (RMSEA = .084; $.065 < \text{RMSEA CL}_{90} < .103$) suggesting adequate error of approximation (MacCallum et al., 1996).

The correlation coefficient comparing parameter estimates between the initial and corrected care aide models again suggests that correction for correlated error did not substantively affect initial parameter estimates ($r = .92$). Though somewhat lower for care aides than for RNs/LPNs, this difference is largely attributable to the cross-loading of informal power across latent variables.

Our final proposition asserted that the strength of association between access to structural empowerment and provision of individualized care would be greater for care aides than the corresponding association for RNs/LPNs. To test this proposition, we compared the two baseline SEM models to ascertain if the measurement properties were equivalent (or invariant) between RNs/LPNs and care aides (Byrne, 1998). Invariance analyses did not support this proposition, $\Delta\chi^2(\Delta df = 1) = 2.38$, *ns*; more precisely, the strength of association between empowerment and reported provision of individualized care is statistically indistinguishable between caregiver groups.

Finally, we compared the relative contribution of each observed variable upon its respective latent construct between groups. We determined patterns of response for six of seven variables to be invariant, $\Delta\chi^2(\Delta df = 6) = 9.31$, *ns* (i.e., formal power, opportunity, information, IC-KNOW, IC-COMMUNICATION, IC-COMMUNICATION-SR). In other words, there were no statistically significant differences in the way in which these observed variables contributed to the measurement of their respective latent constructs. (We did not estimate invariance for the two parameters initially fixed to zero to enable scaling and statistical identification; i.e., support, resident autonomy).

We did find a significant difference, however, for *resources*, $\Delta\chi^2(\Delta df = 1) = 4.19$, $p < .05$. We observed a significantly larger parameter estimate for care aides, suggesting that this

observed variable contributed significantly more to measurement of empowerment for care aides (see Table 6).

In describing these results, it is important to note the considerable similarities between models. This is both an interesting and unexpected result, given the differences between job categories (i.e., amount of education required, pay, job duties, job responsibilities, relative position within the LTC hierarchy). In effect, results of these invariance analyses reveal a strong replication of this model of empowerment and individualized care across distinct occupational categories.

DISCUSSION

This study examined the relationship between formal care providers' access to structural empowerment and their reported ability to provide individualized care to LTC residents. Structural equation models indicate that care provider access to structural empowerment has a strong, statistically significant and direct positive association with reported ability to provide individualized care. For both RNs/LPNs and care aides, empowerment explained 50% and 45% of observed variance in individualized care, respectively. Although we anticipated statistical significance, this strength of association between latent constructs greatly exceeded our initial expectations.

These results lend support to Kanter's (1979) theory of structural empowerment, which, when applied to this study, suggests that if care providers have access to informal power, formal power, information, support, resources and opportunity structures, they may be more empowered to contribute effectively to the provision of individualized care. This finding is also in accord with Tellis-Nayak, who sought to understand the role that managers play in the implementation of person-centered care in LTC facilities. He concluded that when the environment improves quality of life for the care staff, staff are more willing and able to enhance residents' quality of life (Tellis-Nayak, 2007).

Practice Implications

Examination of the models computed for this study indicates that support provides the largest contribution to measurement of access to structural empowerment for both RNs/LPNs and care aides. Given the relative significance of this construct, we conducted chi-square tests to examine this finding more closely. We found response differences for two items: "discussion of further training or education" and "rewards and recognition for

a job well done.” Analysis reveals that 39.6% of care aides indicated that they received little to no discussion of further training or education opportunities, whereas 26.4% of the RNs/LPNs indicated the same is true for them. Similarly, Curry, Porter, Michalski and Gruman (2000) found that a major barrier to the implementation of individualized care is a perceived lack of knowledge and training in alternative approaches by care aides.

When examining responses to the rewards and recognition item, we found that 54.6% of care aides indicated that they receive few if any rewards or recognition for a job well done; the same was true for 45.8% of RNs/LPNs. Pennington, Scott, and Magilvy (2003) found that basic motivational factors such as recognition and a sense of achievement are most important for care aides. They concluded that, to achieve positive outcomes for both care aides and residents, management needs to become more creative in finding ways to recognize care aides and to enhance their sense of achievement. Scalzi, Evans, Barstow, and Hostvedt (2006), who reviewed barriers and facilitating factors in organizational change, found that few, if any, incentives and rewards were linked to the implementation of resident-centered care; instead, incentives in LTC were most often linked to competing or conflicting goals such as medical model-based performance outcomes emphasizing regulatory compliance versus resident needs.

The findings of this study add to the LTC organizational behavior literature and lend further credence to the need for improved training and educational opportunities for frontline staff combined with management practices that enable staff appreciable access to empowerment structures. We should note that several workplace interventions (e.g., Learn, Empower, Achieve, Produce [LEAP], Better Jobs Better Care) have recently been developed that may be useful in addressing these needs (Hollinger-Smith & Ortigara, 2006; Scott, Brannon, Vasey, Dansky, & Kemper, 2007).

The structural equation model computed for care aides indicates that the variable informal power loaded across both latent variables (i.e., empowerment and individualized care). This finding seems to suggest that the quality of relationships in LTC facilities may have a direct and meaningful influence on care aides' ability to provide individualized care. Manojlovich (2007) echoed this finding, concluding that interpersonal factors may be of greater relevance to the development of empowerment than either workplace or motivational views of empowerment because of the unique nature of nursing practice. Additionally, Chandler (1992) stated that empowering environments for nurses are largely dependent upon the development of reciprocal professional relationships. Fletcher (2006) further supported this view, concluding that nurses need to focus on relationships in the workplace to enhance their power. It is important to note that care aides reported significantly lower levels of access to informal power. The perceived lack of reciprocal professional relationships within their work environments may help to explain why the quality of relationships in LTC settings have a direct influence on the care aides' reported ability to provide individualized care; the same was not found for the RNs/LPNs. To clarify, care aides reported that they do not consistently feel respected by their supervisors, nor do they experience the ability to exert meaningful influence on the quality and type of care they provide. Due to the nature of their jobs, this may directly influence resident care.

Analysis of item responses from the informal power subscale reveals that formal care providers generally feel respected and supported by their peers; however, the same cannot be said for the way they feel about relationships with their immediate supervisors. Of the care aides recruited for this study, 44.5% indicated that their immediate supervisors rarely, if ever, ask for their opinion. The same is true for 24.9% of RNs/LPNs. In addition, 54.1% of care aides indicated that they were rarely, if ever, sought out by their supervisors for ideas about ward management issues; 31% of RNs/LPNs indicated a similar experience. When one views this result from the perspective of Kanter's theory, it seems understandable that higher percentages of care aides will experience a lack of access to these empowerment structures within which RNs/LPNs feel a lack of empowerment. Furthermore, if one extends Kanter's theory to the relationship between care aides and residents, then the lack of access to structural empowerment could lead care aides to exert some level of dictatorial control over residents, thereby adversely affecting both the quality and individualization of care.

It is important to note, however, that the opposite may also be true. Kanter's theory asserts that staff who have access to empowerment structures motivate and empower others by sharing these sources of power. This is consistent with findings reported by Bishop and Eaton (2007), who found that care aides who had supervisors who respected and relied upon their knowledge of resident care were more likely to express an elevated sense of responsibility toward their residents and also to experience more job satisfaction. Bishop, Eaton, Gittell, Leutz, Weinberg and Dodson, (2006) concluded that residents' satisfaction with their relationships with nursing staff was significantly related to the proportion of care aides on the unit who indicated that they had a positive relationship with their supervisors (i.e., nursing staff). Therefore, it would seem that the importance of the quality of relationships between supervisors and staff within the organizational hierarchy cannot be overstated.

Limitation of Findings

Generalizability of study findings is limited by various factors. First, we recruited only participants who worked in LTC facilities in three of five British Columbia Health Authorities. Second, we could not ascertain differences between formal care providers who agreed to participate in this study versus those who declined. Also, and perhaps most importantly, we did not examine the perceptions of residents and their family members.

As earlier noted, there was no effort to derive representative caregiver samples. As a result, we are unable to generalize individualized care or empowerment response levels to the overall population of formal caregivers in this province; that was not the intent of this study. Instead, we computed SEM models and invariance analyses to examine the strength of association between latent constructs. Recruitment of convenience samples for this study underscores the need to replicate findings with formal caregivers derived from other jurisdictions (e.g., where universal health care does not yet exist).

The most notable limitation of the current study is likely the cross-sectional nature of data which impedes our ability to make cause-and-effect conclusions. Despite the strongly significant associations between empowerment and individualized care (both RNs/LPNs and care aides), future research is needed to explore the issue of causality between these

constructs. Of particular interest is the possibility of iterative or reciprocal causation between LTC caregivers' ability to provide individualized care and access to empowerment structures; it may be that the relationship between these variables is nuanced. Longitudinal research is required to determine the direction of these strongly significant associations in order to develop effective interventions.

Despite these limitations, this study adds to the burgeoning body of knowledge suggesting that the quality of life for LTC residents is directly related to the quality of work life of their formal caregivers.

Directions for Future Research

This study provides support for the continued development, refinement and testing of models linking LTC work environments to organizational outcomes. The models tested in this study elucidate the strong association between care providers' access to empowerment and provision of individualized care. Future research will be required to extend the findings of this study, including evaluation of incentives linked to the implementation of resident-centered care (i.e., based on rewarding the adaptability of care providers to meet the varying demands and needs of residents), identification of the types of educational opportunities most likely to enhance individualized care, and evaluation of initiatives that enhance the relationship between care providers and their immediate supervisors. Additionally, future research that includes a comparative evaluation of the influence of both structural and personal characteristics on personal perceptions may be very beneficial in both extending our findings and providing further direction for clinical implications. Finally, research is required that addresses residents' and their family members' perceptions as they relate to the LTC work environments.

Summary and Conclusion

It would seem that one cannot overlook the quality of care providers' work lives when attempting to improve the quality of life for LTC residents. The findings of this study suggest that an important aspect of the quality of care providers' work life is access to structural empowerment. Of the empowerment structures, support, especially in the form of enabling access to educational opportunities and providing rewards and recognition for a job well done, seems to be particularly salient to formal care providers. Access to support also appears to be an area in which there is considerable room for improvement. In addition, access to informal power, as measured by the quality of relationships in the workplace, appears directly related to both the quality of work life for care providers and the quality of care they provide. Therefore, management initiatives to enhance individualized care must ensure that supervisors motivate and empower others by actively respecting, valuing, and utilizing the knowledge and skills of those with whom they work. It seems that a balanced focus of management initiatives that address the needs of both care providers and care recipients is needed if the goal of increasing the provision and quality of individualized care in LTC facilities is to be achieved.

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