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## GERONTOLOGIC SERIES

# Development and Psychometric Testing of the Supportive Supervisory Scale

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**Key words**

Supportive supervision, Supportive Supervisory Scale, charge nurses in long-term care, leadership in long-term care

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**Abstract**

**Purpose:** To describe the development and psychometric testing of the Supportive Supervisory Scale (SSS).

**Methods:** The development of the items of the scale was based on Winnicott's relationship theory and on focus groups with 26 healthcare aides (HCAs) and 30 supervisors from six long-term care (LTC) facilities in Ontario, Canada. Content validity of the 15-item instrument was established by a panel of experts. Based on a secondary analysis of data collected from 222 HCAs in 10 LTC facilities in Ontario, Canada, the SSS was subjected to principal components analysis with oblique rotation.

**Findings:** A two-factor solution was accepted, which is consistent with the theoretical conceptualization of the instrument. Factor I was labeled Respects Uniqueness and Factor II was labeled Being Reliable. Internal consistency of Factor I was .95, and that of Factor II was .91. Discriminant validity was also established. The focus groups revealed that "being available to staff" while "recognizing the HCA as an individual, and taking a moment to get to know them" was essential to feeling supported by their supervisor.

**Conclusions:** The SSS is a reliable and valid measure of supervisory support of supervisors working in LTC facilities. At the core of supportive supervision is the supervisor's ability to develop and maintain positive relationships with each HCA. It is through respecting the uniqueness of each HCA and being reliable that supervisor-HCA relationships can flourish.

**Clinical Relevance:** Supportive leadership in LTC settings is a major contributor to HCAs' job satisfaction and retention and to quality of patient care. Therefore, a tool developed and tested to measure supervisors' supportive capacities in LTC is primal to evaluate the effectiveness of supervisors in these environments.

After many years of acknowledging the importance of task- and cognitive-oriented conceptions in health leadership, the tendency is now to understand the importance of the supportive dimensions of leadership (Skinner & Spurgeon, 2005). Evidence is accumulating that the most effective leadership activities of a nurse leader on the unit may be subtler and less visible than task-focused activities, such as communication, team-building, and developing supportive relationships with the supervised staff (Mintzberg, 1998). In fact, the most influential factor in whether workers feel valued and respected at work is

their relationship with their supervisors. Healthcare aides (HCAs), sometimes referred to as nursing aides (NAs) in chronic and long-term care (LTC) environments, perceive that supportive work environments and job satisfaction are influenced by supervisors who engage in effective supportive behaviors (Buelow, Winburn, & Hutcherson, 1999; Chou, Boldy, & Lee, 2002; Kovach & Krejci, 1998; McAiney, 1998; McGilton et al., 2007; Sheridan, White, & Fairchild, 1992; Tellis-Nayak & Tellis-Nayak, 1989).

Yet, these supervisors in LTC have received scant attention. Lack of supportive supervisors partially explains the

high rate of HCAs and NAs leaving their jobs, with annual average turnover rates of 70% to 100% (Anderson, Corazzini & McDaniel, 2004). These high turnover rates are a major contributor to poor staffing in LTC, which negatively influences the quality of care that is delivered to the residents (Dellefield, 2000; Horn, 2006; Noelker, Ejaz, Menne, & Jones, 2006). Yet, when supervisors value their supervised staff as people, for example, by developing relationships with them, the supervised feel increasingly capable and successful (Anderson et al., 2005). As a result, they are more likely to stay in their work setting. It is therefore warranted that, to enhance the quality of care delivered, and to make accurate evaluations and inform policy and practice changes, researchers must use reliable and valid instruments to measure the dimensions of supportive supervisors.

This paper describes the development and psychometric testing of the Supportive Supervisory Scale (SSS), a scale created to measure the level of supportive behavior of nursing staff in a supervisory role. For the purpose of this study, the supervisor was defined as a registered nurse (RN) or registered practical nurse (RPN) working in LTC, who functioned as a shift-specific supervisor for HCAs or NAs providing care for residents.

## Background

### Description of the Problem

Nursing supervisory practices are known to be inadequate in most long-term care facilities (Dellefield, 2008). In many nursing homes, regulated nurses in supervisory positions interact with other nursing staff mainly over staffing problems and there is a heavy reliance on rules, and as such, supervisors often interact with staff to inform them of what they are doing wrong (Anderson et al., 2005). Typical among supervisors are a bleak array of rigid behaviors, clearly defined differences in social status between supervisors and subordinates, and emotional detachment (Foner, 1994). Due to their workload, many supervisors engage in minimal interaction with front-line staff (Anderson et al., 2005). Not surprisingly, little attention is paid to the quality of relationships between supervisors and aides. However, by focusing on effective supervisory behaviors, there is potential to improve supervisor-staff relationships, HCA turnover, and patient outcomes.

A variety of instruments, such as Kouzes and Pozner's leadership survey (Kouzes & Pozner, 1993) and the Mueller-McCloskey Job Satisfaction Scale (Mueller & McCloskey, 1990), have been developed to assess nurse leadership. Hence, most of these instruments have been developed for directors and unit managers in acute care

hospitals. Few instruments have been designed to measure regulated nurses' supportive leadership qualities in LTC. McGilton (2001) for her doctoral work developed two separate supervisory scales, the Charge Nurse Scale (CNS) and the Unit Manager's Scale (UMS) specific for LTC environments. Two scales were developed because the charge nurse and unit manager had different role responsibilities within this teaching LTC unit and we were interested in both perspectives. Both scales were based on Winnicott's relationship theory (Winnicott, 1960, 1970) and assess, respectively, the charge nurses' and unit managers' abilities to be empathic and reliable with the HCAs they supervise. Supportive supervision was defined as the extent to which the leader demonstrated empathy and reliability (also referred to as dependability) with staff. The psychometric properties of both scales were tested and published elsewhere (McGilton, 2003) and were deemed reliable (alphas of 0.80 and 0.81, respectively), and demonstrated preliminary construct validity. Despite Winnicott's relationship theory being focused on essential attributes of nurses who care for patients, these particular qualities are also consistent with the theory of resonant leadership. In this theory, effective leaders are seen to be in tune with the emotions of those around them, to use empathy, and to manage their own emotions effectively to build strong, trusting relationships and create a climate that inspires commitment (Boyatzis & McKee, 2005; McKee & Massimilian, 2006).

Despite both scales being reliable and valid, their use was limited because of the organizational structure in the majority of LTC facilities. Most supervisors in LTC have the responsibilities associated with both the charge nurse and unit manager position. Also, the CNS and UMS development did not include HCAs' or supervisors' input. Therefore, the author decided to combine the items from the two original scales into one scale, by deleting identical items between the two scales and conducting focus groups with HCAs and supervisors to develop additional items, which is described in the next section. This new scale was called the Supportive Supervisory Scale. To aid in clarifying the phases of the development of the SSS, a presentation of the multiple stages are listed in **Table 1**.

### Development of the SSS

The first step in the development of the SSS was to ensure that the items within the scale capture the essence of the supervisor's role from the HCAs' and the supervisor's perspective. Focus groups were conducted with HCAs and supervisors in a convenience sample of six LTC facilities, representing rural and urban homes in Ontario, Canada. The use of focus groups to validate scales has been

**Table 1.** Development and Testing of the Supervisory Scales

Study	Scale(s)	Scale development	Site and sample	Psychometric testing	Publications
The influence of a relationship enhancing program of care on residents, family members and nursing staff. (McGilton, doctoral dissertation, 2001)	Charge Nurse Support Scale (CNS) Unit Manager's Support Scale (UMS)	Development and testing of CNS and UMS	2 LTC facilities 70 nursing staff	1. Content validity 2. Internal consistency 3. Test retest 4. Construct validity 5. Factor structure	McGilton (2003)
Identifying and testing factors that influence supervisors' abilities to develop supportive relationships with their staff. (Canadian Health Services Research Funded Study, McGilton et al., 2004)	Supportive Supervisory Scale (SSS)  SSS	Use of the SSS  <i>Development and testing of SSS</i>	Correlational study: <sup>a</sup> 10 LTC facilities 222 HCAs Test-retest: 1 LTC facility 30 HCAs  <i>Content validation:</i> 5 LTC administrative experts 10 HCAs <i>Development of the SSS:</i> 6 LTC facilities 26 HCAs 30 supervisors <i>PCA and discriminative validity:</i> <sup>a</sup> 10 LTC facilities 222 HCAs	1. Internal consistency reliability 2. Test retest reliability  1. <i>Content validity</i> 2. <i>PCA</i> 3. <i>Discriminative validity</i>	McGilton et al. (2007)

Note. Italics denote data used for this paper.

<sup>a</sup>The same facility and sample.

employed as a strategy in the past (Powell, Single, & Lloyd, 1996) and serves to ensure that the items are of relevance to the targeted group. Study procedures were approved by each facility's research and ethics board, and focus groups were held for supervisors and HCAs in each facility. Groups ranged in size from two to seven participants. Of the 26 HCAs, the majority were female and 43 years of age. The majority of the 30 supervisors were RPNs, employed full-time, and an average of 46 years of age. Participants were asked if the SSS items were relevant to them and if additional items were warranted. The sample size was considered sufficient to generate a rich description of the factors that influence supervisors' abilities to be supportive from the HCAs' and supervisors' perspectives (Morgan, 1996).

All focus group discussion was transcribed verbatim by a professional transcriptionist. Identifying information was removed, and all participants and each of the sites were assigned code numbers. The investigator read the transcripts separately and identified repetitive phrases or concepts using a "constant comparison" technique. An analysis of the transcripts produced key words and phrases that suggested supportive supervisory behaviors. Next, properties and dimensions of categories were de-

veloped. Subcategories were compared for similarities and differences, through which categories were identified, and the final integration of properties was completed (Schwandt, 1997). Methodological rigor was maintained by using process and analytic memos.

Results indicated that HCAs and supervisors affirmed the existing domains of supervisors' attributes include being dependable and empathic. The participants also highlighted a new construct, that of the supervisor's need to build connections with staff. Being dependable meant that supervisors were available to staff to listen and respond to their concerns, and that they kept staff informed of what was new on the unit. One supervisor said, "You really want to make the day work for them, so you might have to call unit meetings and if there's something frustrating them, talk about it, you know, what they expect and what you can do to try to make it happen." Supervised staff unanimously cited communication or sharing of information throughout the facility as being a key supportive behavior. The opportunity to stay informed and communicate changes and developments in this demanding environment most significantly contributed to the staff's sense of being supported and performing their duties effectively.

Staff lauded those empathic supervisors who would try to understand their point of view, recognize and accommodate expressed needs, recognize their abilities, and help them develop. One supervisor said, "I look at the weaknesses and focus more on their strengths and praise them for their strengths, and I still bring their weaknesses up and encourage strength in the weak area." For supervisors, providing "positive reinforcement" and recognizing their abilities, both verbally and demonstratively, to staff was cited as important: "When somebody is doing a great job we make sure there's a positive anecdote written and they're brought in and it's reviewed and it's going to go on your file."

Based on the analysis of the focus group data, the author realized that a domain was necessary for measuring supportive supervision, that is, the supervisors' need to build connections with staff that involved respecting them as individuals. Supervisors' readiness to recognize the staff member as a human being and to take a moment for one-on-one conversations, perhaps inquiring about their family members or personal well-being, was seen as an example of this domain. Supervisors stated, "You earn the person's respect by giving them respect, and that goes a long way," and "It doesn't take any more time to treat staff with respect." Demonstrating respectful behaviors was important in the supervisory role. As one HCA member stated, "She greets us in the morning and acknowledges your work at the end of the day." Based on our analysis of both staff and supervisors' perceptions, the conceptual definition of a supportive supervisor was amended to being an individual who is dependable, empathic, and builds connections with staff.

Consequently, five items reflecting this new domain of "builds connections with staff" were developed, resulting in a 15-item SSS. A 5-point scale was used to measure the supervisors' behaviors, with response options *always*, *often*, *occasionally*, *seldom*, and *never*. To facilitate the interpretation of the measure, the responses to the items were summed to obtain a total score. The instrument could yield an overall score ranging from 15 to 75.

### Validity Evidence for the SSS

Five content experts in LTC administration who had expertise in relational aspects of leadership were consulted. They all held master's degrees in nursing or health administration, had on average 20 years of administrative experience in LTC, and had knowledge of and expertise in LTC supervisor-staff relationships. The experts were asked to rate the SSS in relation to its specificity, representative nature of the items, and the comprehensiveness of the scale (Lynn, 1986). All experts felt that all items represented a realistic expectation of a supportive

supervisory behavior in a LTC facility; using the procedure outlined by Waltz, Strickland, and Lenz (1991), the context validity index was 100%.

The 15-item SSS was then tested for clarity and relevance with a convenience sample of 10 HCAs. During interviews, participants were asked to read the questions and select the response option that best reflected their perception about their supervisor within the facility. Cognitive interview methods were used to identify how and where a question failed to meet its measurement purpose (Collins, 2003). HCAs were encouraged to comment and advise on item wording as well as on content. One revision was made to item 15, which was to include "areas for development" instead of "areas for improvement."

### Reliability Evidence for the SSS

A convenience sample of 30 HCAs from one LTC facility completed the scale twice, 2 weeks apart, as a test of the scale's stability. The test-retest coefficient of the SSS was .70, and the internal consistency was .94, as reported in earlier work (McGilton et al., 2007).

### Construct Validity Evidence

Relative to the scale's construct validity, two hypothesized relationships were tested by McGilton et al. (2007): (a) a positive relationship was expected between supportive supervisors and HCAs' job satisfaction, and (b) a negative relationship was expected between supportive supervisors and HCAs' stress. These relationships were hypothesized because of prior research indicating evidence of associations between job satisfaction, stress, and leadership on a unit (Chou et al., 2002; Hollinger-Smith, Lindeman, Leary, & Ortigara, 2002). The total score of the SSS was positively correlated with the professional supportive domain of Chou and colleague's Nursing Job Satisfaction Scale ( $r=.4$ ,  $p<.001$ ), and the SSS was negatively correlated with HCAs' job-related stress ( $r=-.215$ ,  $p=.001$ ), demonstrating initial construct validity of the SSS.

## Methods

### Design and Procedure

A secondary analysis of the responses to the SSS were newly analyzed for the purpose of this paper to obtain additional reliability, validity, and dimensionality information about the SSS.

## Sample and Setting

The study was conducted in 10 LTC facilities in Canada with a total of 222 HCAs. The mean age of the respondents was 46.1 ( $SD=8.4$ ). Ninety-one percent were female, 40% of whom had English as their second language. Sixty percent of the respondents were employed full-time. The mean number of years having worked in the LTC unit standard deviation was 13.5 ( $SD = 8.8$ ). Details on the procedures, setting, and sample of the study are described in a separate manuscript (McGilton et al., 2007).

## Analysis

The software package SPSS Version 12.0 (SPSS Inc., Chicago, IL) was used to complete analyses focused on testing the scale's dimensionality, reliability, and discriminant validity. Dimensionality of the SSS was assessed using a principal component analysis (PCA), using guidelines by Nunnally and Bernstein (1994). An oblique rotation was used to interpret the dimensionality because there was reason to believe that the latent variables were correlated (Fabrigar, Wegener, MacCallum, & Strahan, 1999) since the three constructs were conceptualized as attributes of a supportive supervisor. Two criteria determined the number of relevant factors in the PCA: (a) factors with eigenvalues equal to or greater than 1 should be rotated (Guttman, 1954); and (b) factoring should be stopped based on the scree test criterion (Cattell, 1996) where the eigenvalues level off. The third criterion was related to the selection of items in the accepted rotated factor solution. That is, an item-factor loading of at least .50 on the primary factor and a difference of at least .20 between an item's loading on the primary factor and any other factor was used to determine factor assignment of the item (Nunnally & Bernstein). Reliabilities of the two-factor analysis solution are calculated including stability of the measure.

Discriminative validity of the SSS was assessed by examining if supervisory support varied between the different facilities. The researcher hypothesized that there would be differences between the 10 LTC facilities. It was hypothesized that there would be differences between facilities given the differing workload of the supervisors within the facilities and the variation by the director's emphasis on the importance of the supervisory role within the facilities. For example, within Facility C, supervisors had attended training management workshops so it was believed that the supervisors would be more supportive. Mean and standard deviation were calculated for each supervisory score for each facility. One-way analysis of variance was the test of significance

performed to examine the differences among the facilities. Multiple comparisons, using Bonferroni's procedure, were completed to compare every pair of facilities. A  $p$  value of less than .005 was considered as significant.

## Results

Less than 1% of the data were missing; therefore, no corrections were made. Scores on the SSS were found to be normally distributed and covered the full range of possible scores (range=20 to 74). The mean score was 55 ( $SD=14.6$ ) for the supervisors, which represents a moderate level of support.

## Reliability

The internal consistency of the SSS revealed that item-to-item correlations were positive, in the .40 to .70 range (**Table 2**), indicating good reliability of the scale. The coefficient alpha for the total 15-item SSS was .94.

## Construct Validity Assessment Using Principal Component Analysis

First, an unrotated PCA was conducted. All 15 items loaded on the first factor, making it difficult to interpret the dimensionality of the scale. A second PCA was then conducted to explore whether a three-factor solution would reveal patterns of relationships among the variables that were proposed within the SSS. Confirmatory factor analysis was not used because it was not clear what relationships were expected among the factors, nor how many latent variables were present (Norman & Streiner, 1994). The oblique rotation indicated that the third factor was trivial; no items loaded strongly on this factor, making it uninterruptable. Next, a two-factor solution with which rotation was forced was conducted. The structure matrix was used to interpret the oblique solution as it has several advantages over the pattern matrix (Gorsuch, 1983).

Mean item scores on the 15-item SSS ranged from 3.76 to 4.31 ( $SD=0.88$  to 1.32; **Table 3**). Factor I had an eigenvalue of 9.9, explaining 66% of the variance. Factor II had an eigenvalue of .98, explaining 6.5% of the variance, which was accepted because the eigenvalues are measured with some degree of error (Norman & Streiner, 1994), and the scree plot began to level off after the first two factors. When the third criterion previously mentioned was used, nine items loaded strongly on Factor I and four items loaded strongly on Factor II. Item 6, "I can rely on my supervisor when I ask for help," loaded on both factors (.733 and .695, respectively). This item was moved to Factor II because of the conceptual consistency

**Table 2.** Item-to-Item Correlations for 15-Item Supportive Supervisory Scale Among LTC Nursing Staff (N=222)

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1.00														
2	.57	1.00													
3	.49	.44	1.00												
4	.52	.64	.58	1.00											
5	.49	.52	.56	.55	1.00										
6	.44	.64	.47	.62	.64	1.00									
7	.40	.51	.39	.55	.59	.60	1.00								
8	.44	.55	.49	.57	.56	.69	.61	1.00							
9	.47	.52	.43	.58	.56	.56	.67	.57	1.00						
10	.34	.37	.28	.49	.49	.55	.43	.48	.47	1.00					
11	.42	.56	.42	.54	.59	.68	.52	.64	.53	.53	1.00				
12	.46	.51	.45	.56	.56	.63	.53	.57	.54	.46	.64	1.00			
13	.41	.58	.44	.57	.50	.64	.47	.57	.50	.42	.58	.67	1.00		
14	.41	.57	.44	.60	.56	.68	.55	.57	.56	.48	.58	.66	.73	1.00	
15	.48	.49	.51	.56	.62	.65	.57	.64	.56	.51	.66	.68	.66	.66	1.00

Note. All correlation coefficients were highly significant ( $p < .001$ ).

with the items in that factor. The 10 items on Factor I represented all of the items on the SSS regarding the supervisor's respecting the uniqueness of the aide; therefore, this factor was labeled "respecting uniqueness." The five items on Factor II referred to the supervisor's ability to be reliable with staff, and was labeled "being re-

liable." Results indicated that the interfactor correlation between Factors I and II was .63, meeting Tabachnick and Fidell's (2001) .30 criterion for interpreting and reporting an oblique rotation.

Nunnally and Bernstein (1994) suggested that if there are clear groups of variables in the correlation matrix,

**Table 3.** Supervisory Scale Means and Factor Loadings (N=222)

Items <sup>a</sup>	Means (SD)	Respects uniqueness (10 items) (alpha=.95)	Being reliable (5 items) (alpha=.91)
Response options: 1=never, 2=seldom, 3=occasionally, 4=often, 5=always			
1. My supervisor recognizes my ability to deliver quality care.	4.26±.96	<b>.829</b>	.376
2. My supervisor tries to meet my needs.	3.89±1.07	<b>.878</b>	.539
3. My supervisor knows me well enough to know when I have concerns about resident care.	4.31±.88	<b>.861</b>	.558
4. My supervisor tries to understand my point of view when I speak to them.	3.98±1.10	<b>.797</b>	.618
5. My supervisor tries to meet my needs in such ways as informing me of what is expected of me when working with my residents.	4.05±1.05	<b>.758</b>	.636
6. I can rely on my supervisor when I ask for help, for example, if things are not going well between myself and my co-workers or between myself and residents and/or their families	3.88±1.26	.733	<b>.695</b>
7. My supervisor keeps me informed of any major changes in the work environment or organization.	4.12±1.16	.572	<b>.849</b>
8. I can rely on my supervisor to be open to any remarks I may make to him/her.	3.80±1.22	.756	<b>.880</b>
9. My supervisor keeps me informed of any decisions that were made in regards to my residents.	4.21±1.07	.588	<b>.895</b>
10. My supervisor strikes a balance between clients/ families' concerns and mine.	3.82±1.17	.724	<b>.840</b>
11. My supervisor encourages me even in difficult situations.	3.77±1.21	<b>.858</b>	.756
12. My supervisor makes a point of expressing appreciation when I do a good job.	3.76±1.32	<b>.807</b>	.640
13. My supervisor respects me as a person.	4.26±1.02	<b>.813</b>	.594
14. My supervisor makes time to listen to me.	4.06±1.03	<b>.812</b>	.679
15. My supervisor recognizes my strengths and areas for development.	3.93±1.15	<b>.881</b>	.661

Note. Item loadings in bold were those comprising each factor.

**Table 4.** Divergent Construct Validity Across the 10 Long-Term Care Facilities

Facility	Number of supervisors	Supportive supervisory scores (mean±SD)
A	18	62.4±13.6
B	31	57.9±12.8
C	39	61.7±14.7
D	21	47.1±20.1
E	16	59.5±15.2
F	43	62.0±11.3
G	4	49.3±24.7
H	15	51.9±18.6
I	6	62.2±14.8
J	29	56.2±12.2
Total	222	58.2±15.1
ANOVA		$F=2.683$
[ <i>p</i> value]		[.005]

the orthogonal rotations generally lead to the same major groups as oblique rotations. The two-factor PCA performed in the current study was rotated using orthogonal rotation. The items that loaded on the two-factor Varimax orthogonal rotation and the two-factor oblique rotation were identical, giving further support to the two-factor structure of the SSS. Coefficient alpha reliabilities on the items comprising the two factors were the following: Factor I=.95 and Factor II=.91. The coefficient alpha for the total 15-item SSS was .94.

The accepted two-factor oblique rotated structure was most interpretable for the following reasons: (a) most loadings were either high or low; (b) each factor showed three or more strong loadings, which enhances reliability; and (c) all variables except one loaded strongly (>.40) on only one factor (Norman & Streiner, 1994). Finally, the final model produced a rotated solution that was theoretically sensible (Fabrigar et al., 1999).

### Discriminant Validity

The discriminant validity, which was also assessed for the SSS, varied significantly between sites. For example, within Facilities C and F, scores on the SSS are significantly higher than those for Facility D ( $F = 2.68$ ,  $p < .005$ ; Table 4).

### Discussion

Focus groups with HCAs and supervisors, content validity assessment, and pilot testing guided the development of the SSS. The psychometric findings provided support for the scale's utility. The PCA procedures carried

out on the 15-item SSS in the present study were performed on a large enough sample of HCAs (Norman & Streiner, 1994), and accepted criteria were used to determine the best factor solution. For the 15 items, loadings on the forced two-factor rotated solution were strong.

The two-factor solution, however, did not at first appear to conform to the three dimensions upon which the scale was initially based. But the two factors, dependability and respecting uniqueness, were consistent with the theoretical underpinning of the SSS, since respecting uniqueness takes into account empathy and building connections with staff, while being reliable is conceptually consistent with being dependable. In order to respect the HCAs' uniqueness, supervisors are called upon to be empathic, listen to staff, and demonstrate respect for staff. Being reliable as a supervisor involves being available for them when required, and keeping staff informed of changes within their work environment. Therefore, the two-factor solution provides construct validity of the scale. At the core of effective supervision is a supervisor's ability to develop and maintain positive working relationships with each worker. The most effective supervisors remember that caring for elders in LTC is highly stressful and that HCAs do not always have the resources to address these stressors. Supervisors that value and respect HCAs and take into account these stressors retain their staff (Anderson et al., 2004).

The two-factor solution, "respecting uniqueness" and "being reliable," was also found to be consistent with the concepts that emerged from the focus groups conducted with staff in this study. The participants were able to describe the phenomenon of being supported in their own words. They indicated the importance of a supervisor's being dependable, that is, trustworthy, available, and keeping staff informed of any changes in their work environment. HCAs spoke at great lengths about the need to be respected and to be known as a person. Day-to-day expressions of gratitude and respect, as well as concerted efforts to ensure effective communication throughout the facility, are keys to creating a workplace where staff feel supported and appreciated for the work that they do. By using these supportive behaviors, it is possible that a culture of blame that exists in many LTC facilities may be replaced by a focus of listening to each other's point of view, with the aim of improving care. Administrators are called on to also be supportive to the regulated staff for this type of culture shift to transpire. Building connections with staff between all levels will also enhance information flow, connection, cooperation, team work, and patient outcomes, as found in previous research (Anderson et al., 2004).

The PCA results complemented the existing leadership literature on the need for respect in the workplace



(Laschinger, 2004) and the need to focus on resonant leadership (Boyatzis & McKee, 2005; McKee & Massimilian, 2006). Resonant leaders are called on to build strong trusting relationships with staff and to create a climate of hope and optimism (McKee & Massimilian). As well, these study results reaffirm work by Tellis-Nayak (2007), who used a human relations framework to explain how caring managers fashion a person-centered workplace conducive to turning workers into devoted caregivers. HCAs offer their loyalties and commitment in a work setting when managers recognize the person behind the HCAs' role, challenge and support them, and help them to achieve, relate, and enjoy their work. Previous construct validity testing of the SSS provides additional evidence that a supportive supervisor is related to HCAs' job satisfaction and is related to less stress in the workplace (McGilton et al., 2007).

The discriminant validity of the SSS was also examined relative to construct validity. The significant differences between HCAs' perceptions of supervisory support found between LTC facilities support the proposition that supervisors' behaviors vary. The SSS was able to differentiate supportive behaviors of supervisors between facilities. In some facilities, supervisors were rated as being very supportive, whereas in others, less so. Understanding how factors such as management training, workload, experience, and support from the director of care (McGilton et al., 2007) influence HCAs' perceptions of supervisors' supportive behaviors is important in analyzing these differences. More research is needed to examine the extent to which these potentially important factors influence the supervisor. In future research, they should be measured concurrently with appropriate instruments. Since supportive supervisors influence staff retention, a focus on how much variance in staff retention is influenced by supportive supervisors is a much needed next step. Current high turnover rates for HCAs in LTC may be diminished with effective supportive supervisors (Noelker et al., 2006). In addition, supportive supervisors may motivate staff to follow in a positive way and, so, to facilitate best practices.

The study has a few limitations. First the scale was developed based on Winnicott's relationship theory, which is not a leadership theory. However, similar constructs of respecting staff and being dependable are found in some leadership theories, such as the theory of resonant leadership. Another limitation is that we have used this scale exclusively with a population of staff within one province. However, we believe this scale to be easy to use and applicable to many other jurisdictions, since only 1% of the responses were missing with this primarily English as a second language population.

There are many clinical and research implication of using the SSS. In the clinical setting the scale could be used to determine how much support that staff perceived receiving from their supervisors. Such data would give administrators and policy-makers valuable information from which to make evidence-based decisions to enhance the supportive work environments within the facility. The SSS could also be used to monitor supervisors' effectiveness in practice, to guide performance dialogues, and to help supervisors understand the needs of their staff. For research purposes, the SSS can be used to test the effect of a supervisory intervention or stimulate research questions to build future healthy work environment research. These examples all serve a common goal: to improve the overall care of residents in LTC.

## Conclusions

The SSS was refined and tested based on focus groups with HCAs, supervisors, and consultations with expert administrators. The scale has shown evidence of being a reliable, valid, and useful tool to assess the quality of supportive supervisors in LTC. A strong two-factor solution was obtained, which was conceptually related to the theoretical concepts from which the scale was derived. At the core of supportive supervision is the supervisor's ability to develop and maintain relationships with their staff. It is through respecting the uniqueness of each HCA and being reliable that these relationships can flourish. The SSS can be used as a powerful tool to illuminate dynamics between supervisors and HCAs, which may influence retention and quality of resident care.

## Clinical Resources

- Measuring Long-Term Care Work: A Guide to Selected Instruments to Examine Direct Care Worker Experiences and Outcomes, <http://aspe.hhs.gov/daltcp/reports/dcwguide.htm>
- RNAO, <http://www.rnao.org/Page.asp?PageID=861&SiteNodeID=133>

## References

- Anderson, R.A., Ammarell, N., Bailey, D.E., Colon-Emeric, C., Corazzini, K., Lekan-Rutledge, D., et al. (2005). The power of relationship for high-quality long-term care. *Journal of Nursing Care Quality*, 20(2), 103–106.
- Anderson, R.A., Corazzini, K.N., & McDaniel, R. Jr. (2004). Complexity science and the dynamics of climate and communication: Reducing nursing home turnover. *The Gerontologist*, 44(3), 378–388.

- Boyatzis, R., & McKee, A. (2005). *Resonant leadership: Renewing yourself and connecting with others through mindfulness, hope and compassion*. Boston: Harvard Business School Press.
- Buelow, J.R., Winburn, K., & Hutcherson, J. (1999). Job satisfaction of home care assistants related to managerial practices. *Home Health Care Services Quarterly*, 17(4), 59–71.
- Cattell, R.B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, 1, 245–276.
- Chou, S.C., Boldy, D.P., & Lee, A.H. (2002). Staff satisfaction and its components in residential aged care. *International Journal for Quality in Health Care*, 14(30), 207–217.
- Collins, D. (2003). Pretesting survey instruments: An overview of cognitive methods. *Qualitative Life Research*, 12, 229–238.
- Dellefield, M.E. (2000). The relationship between nurse staffing levels in nursing homes and quality indicators: A literature review. *Journal of Gerontological Nursing*, 27(6), 14–28.
- Dellefield, M.E. (2008). Nursing staff descriptions of clinical supervision and management in veterans-affiliated nursing homes. *Journal of Nursing Care Quality*, 24, 66–74.
- Fabrigar, L.R., Wegener, D.T., MacCallum, R.C., & Strahan, E.J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4, 272–299.
- Foner, N. (1994). *The caregiving dilemma: Work in an American nursing home*. Berkeley, CA: University of California Press.
- Gorsuch, R.L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Guttman, L. (1954). Some necessary conditions for common factor analysis. *Psychometrika*, 10, 149–161.
- Hollinger-Smith, L., Lindeman, D., Leary, M., & Ortigara, A. (2002). Building the foundation for quality improvement: LEAP for a quality long term care workforce. *Seniors Housing & Care Journal*, 10(1), 32–43.
- Horn, S.D. (2006). RN staffing and long-term care. *American Journal of Nursing*, 106(3), 15–16.
- Kouzes, J.M., & Pozner, B.Z. (1993). Transformational leadership: The credibility factor. *Healthcare Forum Journal*, 36(4), 16–24.
- Kovach, C.R., & Krejci, J.W. (1998). Facilitating change in dementia care. *Journal of Nursing Administration*, 28(5), 17–27.
- Laschinger, H. (2004). Hospital nurses' perceptions of respect and organizational justice. *Journal of Nursing Administration*, 34(7/8), 354–364.
- Lynn, M.R. (1986). Determination and quantification of content validity. *Nursing Research*, 35(6), 382–385.
- McAiney, C.A. (1998). The development of the empowered aide model. *Journal of Gerontological Nursing*, 24(1), 17–22.
- McGilton, K., McGillis-Hall, L., Pringle, D., O'Brien-Pallas, L., & Krejci, J. (2004). *Identifying and testing factors that influence supervisors' abilities to develop supportive relationships with their staff*. 2004 Canadian Health Services Research Foundation. (unpublished report).
- McGilton, K.S. (2001). *The influence of a relationship enhancing program of care on residents, family members and nursing staff*. Doctoral dissertation, University of Toronto, Toronto, Ontario, Canada.
- McGilton, K.S. (2003). The development and psychometric evaluation of supportive leadership scales. *Canadian Journal of Nursing Research*, 35(40), 72–86.
- McGilton, K.S., McGillis-Hall, L., Wodchis, W.P., & Petroz, U. (2007). Supervisory support, job stress, and job satisfaction among long-term care nursing staff. *Journal of Nursing Administration*, 37(7/8), 366–372.
- McKee, A., & Massimilian, D. (2006). Resonant leadership: A new kind of leadership for the digital age. *Journal of Business Strategy*, 27(5), 45–49.
- Mintzberg, H. (1998). Covert leadership: Notes on managing professionals. Knowledge workers respond to inspiration, not supervision. *Harvard Business Review*, 76(6), 140–147.
- Morgan, D. (1996). Focus groups. *Annual Review of Sociology*, 22, 129–152.
- Mueller, C.W., & McCloskey, J.C. (1990). Nurses' job satisfaction: A proposed measure. *Nursing Research*, 39(2), 113–117.
- Noelker, L.S., Ejaz, F.K., Menne, H.L., & Jones, J.A. (2006). The impact of stress and support on nursing assistant satisfaction with supervision. *Journal of Applied Gerontology*, 25, 307–323.
- Norman, G., & Streiner, D. (1994). *Biostatistics: The bare essentials*. Toronto: Mosby.
- Nunnally, J.C., & Bernstein, I.H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- Powell, R.A., Single, H.M., & Lloyd, K.R. (1996). Focus groups in mental health research: Enhancing validity of user and provider questionnaires. *International Journal of Social Psychiatry*, 42(3), 193–206.
- Schwandt, T.A. (1997). *Qualitative inquiry: A dictionary of terms*. Thousand Oaks, CA: Sage.
- Sheridan, J.E., White, J., & Fairchild, T.J. (1992). Ineffective staff, ineffective supervision or ineffective administration? Why some nursing homes fail to provide adequate care. *Gerontologist*, 32(3), 334–341.
- Skinner, C., & Spurgeon, P. (2005). Valuing empathy and emotional intelligence in health leadership: A study of empathy, leadership behaviour and outcome effectiveness. *Health Services Management Research*, 18(1), 1–12.
- Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th ed.). Needham Heights, MA: Allyn & Bacon.
- Tellis-Nayak, V. (2007). A person-centred workplace: The foundation for person-centred caregiving in long-term care. *Journal of the American Medical Directors Association*, 8(1), 46–54.

- Tellis-Nayak, V., & Tellis-Nayak, M. (1989). Quality of care and the burden of two cultures: When the world of the nurse's aide enters the world of the nursing home. *Gerontologist*, 29(3), 307–313.
- Winnicott, D.W. (1960). The theory of the parent–infant relationship. In P. Buckley (Ed.), *Essential papers on object relations* (pp. 233–253). Washington, DC: American Psychological Association.
- Winnicott, D.W. (1970). Cure versus care. In C. Winnicott, R. Shepard, & M. Davis (Eds.), *Home is where we start from* (pp. 112–120). New York: W.W. Norton.