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Effect of Upward Feedback on the Gap Between Manager
and Subordinate Perception of Manager Behavior

Jessica Beesley Zetterquist

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirement for the degree of
Masters of Science

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August 2010

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ABSTRACT

Effect of Upward Feedback on the Gap Between Manager and Subordinate Perception of Manager Behavior

Jessica Beesley Zetterquist

Department of Nutrition, Dietetics and Food Science

Master of Science

Objective: To assess the effect of upward feedback on the perception gap of manager-rated and subordinate-rated managerial behavior scores using the Multifactor Leadership Questionnaire (MLQ).

Design: Phase I questionnaires assessed the use of upward (subordinate to manager) feedback and were used to form Feedback and Comparison groups. Phase II questionnaires included feedback, attitudinal, and demographic questions and the MLQ. MLQ scores were compared between the two groups.

Subjects/setting: Directors of Food and Nutrition Services and Clinical Nutrition Managers and their respective subordinates in a hospital setting.

Statistical analyses performed: General Linear Model (using SAS Version 9.2, Cary, NC) was used to determine the relationships between MLQ scores and questions of interest.

Results: Upward feedback practices in both the Feedback and Communication groups did not correspond to the Phase I reports. Feedback managers did not have higher MLQ scores based on feedback group, manager tenure, and manager implementation of feedback. Managers whose subordinates who enjoyed their jobs had higher subordinate-rated MLQ scores.

Conclusions: Policies and practices of upward evaluation methods are not clear and need to be studied further in a hospital dietetics setting.

Keywords: Multifactor Leadership Questionnaire, subordinate evaluation, dietetics, hospital

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Brigham Young University

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The thesis of Jessica Beesley Zetterquist is acceptable in its final form including (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory and ready for submission.

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MANUSCRIPT

Prepared for the Journal of American Dietetic Association

ABSTRACT

Objective To assess the effect of upward feedback on the perception gap of manager-rated and subordinate-rated managerial behavior scores using the Multifactor Leadership Questionnaire (MLQ).

Design Phase I questionnaires assessed the use of upward (subordinate to manager) feedback and were used to form Feedback and Comparison groups. Phase II questionnaires included feedback, attitudinal, and demographic questions and the MLQ. MLQ scores were compared between the two groups.

Subjects/setting Directors of Food and Nutrition Services and Clinical Nutrition Managers and their respective subordinates in a hospital setting.

Statistical analyses performed General Linear Model (using SAS Version 9.2, Cary, NC) was used to determine the relationships between MLQ scores and questions of interest.

Results Upward feedback practices in both the Feedback and Communication groups did not correspond to the Phase I reports. Feedback managers did not have higher MLQ scores based on feedback group, manager tenure, and manager implementation of feedback. Managers whose subordinates who enjoyed their jobs had higher subordinate-rated MLQ scores.

Conclusions Policies and practices of upward evaluation methods are not clear and need to be studied further in a hospital dietetics setting.

INTRODUCTION

Managers assume many roles in dietetics settings. The role of leader is one of the most important roles of a manager (1), therefore it is important to understand the characteristics that effective leaders share. Recent leadership theories have identified “transformational” leadership characteristics as being effective, and research has recognized the positive outcomes related to this leadership style (2, 3).

Transformational leaders empower followers and can shape their motives, values, and goals (4). Because managers who are evaluated as top performers exhibit characteristics of transformational leadership (2, 3), this cluster of leadership behaviors was used as the standard for this investigation.

The Multifactor Leadership Questionnaire (MLQ) has been used extensively in leadership research and has been tested for validity and reliability (5). The purpose of the MLQ is to measure perceptions of leadership behavior. Managers rate their own perceived behavior, while subordinates rate their perceptions of the manager’s behavior. By comparing the differences between the self-rated and subordinate-rated perceptions of the managers’ behavior, the difference in the perception gap can be assessed.

Another role a manager plays is that of evaluator. Traditionally managers evaluate subordinates. However, an increasing trend is for subordinates to evaluate managers, often called “upward feedback.” This type of feedback is most often used for developmental purposes (6).

Feedback from subordinates, or upward evaluation, is one characteristic related to improving the performance and self-awareness of the manager (2, 7). Often self-ratings

and subordinate-ratings of managerial behavior do not agree; many leaders do not have an accurate perception of their own behavior.

Several studies have shown upward feedback to be an important tool to decrease this self-perception gap (7, 8, 9). Upward feedback given to managers from subordinates can improve the accuracy of their self-awareness over time (6). Halverson et al (2) found that managers with higher self-rater agreement, meaning the gap between how the manager viewed his/her behavior and how the subordinate viewed the manager's behavior was small, had higher promotion rates in the Air Force (2).

Sarver (10) studied dietetics managers in hospital settings and found a large discrepancy between self-rated and subordinate-rated scores on the MLQ. She suggested that the lack of upward feedback may have been the cause for the incongruity. To study a group that receives formal, upward feedback frequently, Tapahe (7) administered the MLQ to dietetics instructors and their students. When compared to Sarver's results, the dietetics instructors had significantly smaller perception gaps than did the hospital managers (6). These studies (2, 7, 10) imply that managers who receive formal, upward feedback have a more realistic view of their behavior and thus may improve their performance. The purpose of this investigation was to explore the effects of upward feedback or evaluation in the dietetics management setting. It was expected that dietetics managers receiving formal, upward feedback on a regular basis would have a more accurate self-perception than managers who do not receive it.

METHODS

Sample

Directors of Food and Nutrition Services (DFNS) and Clinical Nutrition Managers (CNM) in hospitals of 200-499 bed size from the American Hospital Association Database and their respective subordinates were surveyed. Two groups, Feedback and Comparison, were formed based on the use of upward evaluation or feedback. Criteria for being placed in the Feedback group included using formal, upward evaluation at least once per year and having the practice in place for at least one year prior to the commencement of the study. Facilities not using a formal upward evaluation tool at least once per year were assigned to the Comparison group.

Study Design

The study design consisted of two phases. In Phase I, a letter of transmittal and short questionnaire were used to determine the use, frequency, and origin of upward feedback practices in a hospital setting. Completion of Phase I indicated willingness to participate in Phase II and indicated to which group the facility would be assigned.

During the second phase, both managers and their respective subordinates in the Feedback and Comparison groups completed the survey instrument. This survey instrument consisted of three parts: 1) demographics, 2) feedback practices and job enjoyment, and 3) Multifactor Leadership Questionnaire (5). Follow-up was completed via mail and email in both phases to improve response rate.

Approval to conduct this research was obtained from the Institutional Review Board for Human Subjects (IRB) at Brigham Young University. The letter of transmittal, which formed the front page of the questionnaire, informed participants that participation

was voluntary and that informed consent was implied if they completed and returned the survey.

Statistical Analysis

All statistical analyses were carried out using the SAS statistical analysis computer software (Version 9.2, Cary, NC). Means and frequencies for the Transformational Leadership Total Score (TFS), TFS sub-scores [Idealized Influence-Attributed (IIA), Idealized Influence-Behavior (IIB), Inspirational Motivation (IM), Intellectual Stimulation (IS), and Individual Consideration (IC) scores], Outcomes of Leadership Total Score (OLS) and OLS sub-scores (Extra Effort, Effectiveness, Satisfaction) were calculated for both managers' and subordinates' ratings.

To assess the perception gap between self-rated and subordinate-rated views of managerial behavior, differences for the manager and subordinate scores were found by subtracting the manager score from the average subordinate score. General Linear Model (GLM) was used to determine the relationship between TFS and OLS scores; TFS and OLS sub-scores; differences between self-rated and subordinate-rated scores; and questions of interest, such as job enjoyment, time in current position, time in all management positions, and other demographic variables. Tukey-Kramer was used to determine the pair-wise differences in the means of sub-scores and total scores between the Feedback and Comparison groups.

RESULTS

Directors of Food and Nutrition Services at all of the 1,331 hospitals in the American Hospital Association database with bed size 200-499 were invited to participate in the survey. Of these, 250 responded to Phase I (18.8%).

Of the 250 facilities that responded to Phase I, 81 managers responded in Phase II. To be included in the analysis, the manager's and at least one of the corresponding subordinate's questionnaires had to be received. Seventy-seven managers were eligible to be included in the Phase II analysis (30.8% of Phase I respondents). Determining the exact subordinate response rate is not practical because the number of subordinate surveys distributed by managers is not known. Fifty-six managers were assigned to the Comparison group, along with their respective 289 subordinates. Twenty-one managers were assigned to the Feedback group, along with their respective 97 subordinates.

Demographics of Sample

The majority of managers (61%) who completed Phase II were CNM. The majority of both managers and subordinates were White (94.8% of managers, 86.5% of subordinates) and female (89.6% of managers, 92.3% of subordinates). The greatest percentage of managers (32.5%) fell into the 51-60 age group, while subordinates were more evenly distributed across all age groups.

The majority of managers (55.9%) held a Master's or Doctoral degree, while the greatest percentage of subordinates (47.2%) had an Associate's or Bachelor's degree. Most managers (90%) and subordinates (63%) were Registered Dietitians. The largest percentage of managers (44.2%) had salaries from \$60,000-\$79,999. The largest percentage of subordinates (39.6%) had salaries in the range of \$40,000-\$59,000. Most managers (96.1%) and subordinates (73.1%) work full time.

Managers and subordinates were also distributed equally over the ranges of time in their current position, with the greatest percentage of both managers (53.3%) and subordinates (57%) being in their current position ≤ 5 years. However, the majority of

managers (55.9%) had been in any management position ≥ 11 years. The majority of managers (93.5%) and subordinates (86.8%) agreed or strongly agreed with the statement, *I enjoy my job*.

Based on Phase I results, 90% of the Feedback group reported using formal, upward evaluation practices at least once per year, with 10% using it more often. Eighty-six percent had been using upward evaluation for over a year prior to the beginning of the study, and the remaining had used it for one year. The formal, upward evaluation practice was reported to originate from a variety of sources; 43% at the hospital level, 33% at the corporation level, 29% other sources and, 5% at the departmental level.

Feedback-Related Questions

Interesting relationships were found between manager and subordinate perceptions of giving and seeking feedback. When rating formal, written feedback practices, managers in the two groups rated their behavior differently than was reported in Phase I (Table 1). All managers and subordinates in the Feedback group were expected to report the use of upward, formal feedback at least once per year, however only 28.6% of managers and 28.8% of subordinates reported receiving (or giving) formal, upward feedback one or more times per year. Many managers and subordinates in the Comparison group reported receiving and giving formal, upward feedback, contrary to the Phase I results (Table 1).

Informal feedback differences were also found between the groups. The majority of Feedback managers (66.6%) reported receiving informal feedback three or more times per year, while only 20.7% of Feedback subordinates reported giving informal feedback that frequently. Similar findings were present in the Comparison group where 57.1% of

managers reported receiving informal feedback three or more times per year, but only 24.6% of their subordinates reported giving informal feedback this often. In contrast, only 9.6% of Feedback managers and 10.7% of Comparison managers reported *Never* receiving informal feedback, while 51.5% of Feedback subordinates and 53.3% of Comparison subordinates reported never giving informal feedback (Table 1).

To assess the managerial perception gap, differences between manager-rated and subordinate-rated MLQ scores were calculated. No significant differences for the TFS, OLS and sub-scores were found between the Feedback and Comparison groups (Table 2). In addition, it appears that the subordinates' ratings of their managers' behavior were not affected by group assignment.

Job-Related Factors

Actively implementing feedback was measured by the managers' report of valuing subordinate feedback and improving managerial behavior based on feedback. There were no significant differences found between subordinate-rated scores based on the managers' report of trying to improve their behavior based on subordinate feedback (Table 3). The majority of managers, regardless of group, reported strongly agreeing that they value feedback from their employees and that they try to improve their performance based on feedback from their subordinates and from their managers.

No significant differences were found for sub- or total scores in the TFS or OLS when examining the managers' total time in *any* management position. However, those who had been in their *current* position for 6-10 years had significantly higher IM, IC, and TFS scores than those who had been in their position for 12 or more years (Table 4).

Subordinates who strongly agree that they enjoyed their jobs had significantly higher TFS and OLS sub-scores and total scores than did those who did not (Table 5). The majority (86.8%) of subordinates agree or strongly agree that they *enjoy their job*.

DISCUSSION AND CONCLUSIONS

Upward Feedback

Overall, the sample did not respond in the manner expected based on the review of the literature concerning the effects of formal, upward evaluation (2, 7, 10). Based on Phase I responses, 100% of Feedback subordinates should have reported giving their managers formal, upward feedback at least once per year. However, in Phase II only 28.8% of Feedback subordinates reported doing so. Likewise, 100% of Feedback managers should have reported receiving formal feedback from their subordinates, but only 26.8% of Feedback managers reported receiving such feedback in Phase II. Furthermore, a surprisingly large percentage of subordinates (70.1%) in the Feedback group reported *Never* giving formal, upward feedback.

Though it is possible that managers and subordinates misunderstood the question that assessed their use of formal, upward feedback in Phase II, that is unlikely due to the formatting and specificity given in the question, and the clearly different responses to the questions regarding formal and informal feedback.

One explanation of this discrepancy involving formal, upward feedback may be that Phase I was targeted at DFNS, who have a clear understanding of departmental evaluation *policies*. Phase II was targeted at managers and subordinates, where actual evaluation *practices* occur, rather than creation of the evaluation policies. With only 26.8% of managers and 28.8% of subordinates in the Feedback group reporting that they

receive (or give) formal, upward feedback once or more per year, clearly there is a lack of communication and/or training between directors, managers, and subordinates concerning evaluation policies.

Further evidence of lack of communication and/or training was found in the unsuccessful attempt to reorganize groups based on Phase II responses. Within any one manager's group of subordinates, the subordinates were not consistent in their responses about the frequency of giving formal evaluation to their manager; some reporting never giving formal, upward feedback and some reporting multiple times per year.

Contrary to what was expected, the data gathered in this study do not show that formal, upward evaluation narrows the perception gap of manager and subordinate views of managerial behavior as measured by the MLQ. The inconsistent upward feedback practices within the Feedback and Comparison groups invalidated the group assignments, thereby bringing the results into question.

Though the differences between the Feedback and Comparison groups were not statistically significantly different, the differences may be practical. When looking at the self-rated and subordinate-rated perception gap between the Feedback and Comparison groups, a 2.4-point decrease in difference scores in the Feedback group shows that there may be some value of formal, upward feedback. However, because it appears that the feedback practices in the groups are intermixed, this perception gap difference might be even more distinct if the formal, upward feedback practices were more clearly defined between groups.

The nature of informal feedback is quite different than that of formal, upward feedback. Where formal, upward feedback is written and uses an evaluation form,

informal feedback can range from casual comments to informal notes. It is interesting to note that managers reported receiving informal feedback more often than subordinates reported giving informal feedback. This implies that managers are sensitive to informal feedback, whereas subordinates may not realize their comments or suggestions are considered informal feedback.

Job-Related Factors

Subordinate scores did not significantly differ between the Feedback and Comparison groups based on how actively managers implemented subordinate feedback. Because most managers (92.2%) agreed or strongly agreed that they try to improve their performance based on subordinate feedback, it is hard to see a trend with the remaining portion of the managers. One encouraging result was that most managers in both groups have positive attitudes about valuing and implementing subordinate feedback.

The tenure of the manager also did not have a significant impact on the subordinate-rated MLQ score. In fact, those with the highest subordinate-rated TFS scores (61.6 ± 3.2) were managers who had been in their *current* positions six to 11 years. The managers who had been in their *current* positions for 12 or more years had the lowest subordinate TFS scores (52.4 ± 2.3). Significant differences were not found between groups based on time in *any* management positions.

Subordinates who strongly agreed that they enjoyed their jobs had significantly higher TFS and OLS sub-scores and total scores than did the other subordinates, meaning they rated their managers' behavior significantly higher on these scales. It is also encouraging that the majority of subordinates (86.8%) strongly agree or agree that they enjoy their jobs. It is unknown, however, if subordinates enjoy their jobs because their

managers have more transformational characteristics or if they rate their managers' behavior higher because they enjoy their jobs.

Future Research

Future research needs to be done on the upward evaluation practices versus the policies of nutrition departments in hospitals. Based on the findings of this study, implementation of feedback policies may widely vary in hospital settings. Investigating the causes of departures from feedback policies may be beneficial to improve policy implementation and possibly productivity.

To further explore the implementation of feedback policies, research should include the collection of formal, upward evaluation forms. As stated earlier concerning the differences in reports of formal, upward feedback practices, the discrepancies between what the department heads (DFNS) and the subordinates view as evaluation practices show a possible lack of training or communication within facilities. This brings to light possibilities for future research into policies and how they are implemented in facilities. Investigating specific training practices for both managers and subordinates may provide additional insight. The findings of this study suggest that communication and training is critical in the execution of upward, formal feedback.

One aspect of feedback influencing managerial behavior that was not investigated in this study is the role that subordinate evaluations play in merit-based decisions. It is expected that the greater accountability managers have for feedback from the subordinate evaluations, the more changes in behavior would take place. Measuring the impact subordinate evaluations have on manager promotion, pay increase, or other consequences would be important to consider in future research.

Along with research into implementation of feedback policies, further research could be carried out concerning the effects of formal, upward feedback including self-perceptions, promotion rates of managers, and group effectiveness. As this area of management is not well studied, many aspects require further research.

Another area of future research could be subordinate job enjoyment as it relates to transformational leadership in hospital settings. Other factors, including individual transformational characteristics of managers, position tenure, and training practices, could be examined.

Conclusion

Policies and practices of upward evaluation methods are not clear and need to be studied further in a hospital dietetics setting. Focusing on training and implementation practices may provide important insight into feedback applications.

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Table 1. Upward Feedback Characteristics by Feedback and Comparison Groups

Characteristic	Feedback Group				Comparison Group			
	Managers		Subordinates		Managers		Subordinates	
	n	% ^a	n	% ^a	n	% ^a	n	% ^a
Subordinate Gives/ Manager Receives Formal Written Feedback								
Not at all (Never to less than once a year)	13	61.9	68	70.1	44	78.6	215	74.4
1-2 times per year	6	28.6	26	26.8	10	17.8	66	22.8
3+ times per year	--	--	2	2.0	2	3.6	5	1.8
Subordinate Gives/ Manager Receives Informal Feedback								
Not at all (Never to less than once a year)	2	9.6	50	51.5	6	10.7	154	53.3
1-2 times per year	4	19.0	25	25.8	18	32.1	63	21.8
3+ times per year	14	66.6	20	20.7	32	57.1	71	24.6

^a Totals may not reflect 100% due to non-responses.

Table 2. Mean Differences in TFS^a Scales and Total Scores Between Manager and Subordinates (Perception Gap) by Group

Transformational Leadership Scales	Feedback Group	Comparison Group
	LS Mean ± SE	LS Mean ± SE
Idealized Influence—Attributed (IIA)	-0.2 ± 0.7	1.3 ± 0.4
Idealized Influence—Behavior (IIB)	0.5 ± 0.7	1.6 ± 0.4
Inspirational Motivation (IM)	1.0 ± 0.6	1.3 ± 0.4
Intellectual Stimulation (IS)	2.5 ± 0.6	1.8 ± 0.4
Individual Consideration (IC)	2.4 ± 0.6	2.5 ± 0.4
TFS ^a Total Differences	6.1 ± 2.8	8.5 ± 1.7

^aTFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).

Table 3. Differences between Manager and Subordinate TFS^a and OLS^b Scales and Total Scores Based on Level of Valuing Employee Feedback

<i>In general, I value feedback I receive from my employees...</i>					
	Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Strongly Disagree
Managers	(n=50, 64.9%)	(n=19, 24.7%)	(n=3, 3.9)	(n=1, 1.3%)	(n=3, 3.9%)
Transformational Leadership Scales	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE
Idealized Influence—Attributed	1.0 ± 0.4	0.4 ± 0.7	-0.4 ± 1.7	8.2 ± 3.0	-0.2 ± 1.7
Idealized Influence—Behavior	1.4 ± 0.4	1.5 ± 0.7	-1.6 ± 1.8	7.8 ± 3.1	0.2 ± 1.8
Inspirational Motivation	1.2 ± 0.4 ^{xy}	1.3 ± 0.6 ^{xy}	-2.5 ± 1.6 ^x	8.4 ± 2.7 ^y	1.2 ± 1.6 ^{xy}
Intellectual Stimulation	2.1 ± 0.4	2.0 ± 0.6	-1.2 ± 1.6	7.2 ± 2.8	0.8 ± 1.6
Individual Consideration	2.8 ± 0.4	2.0 ± 0.6	2.4 ± 1.6	6.6 ± 2.8	0.2 ± 1.6
TFS ^a Total Differences	8.5 ± 1.8	7.2 ± 2.9	-3.3 ± 7.2	38.2 ± 12.5	2.1 ± 7.2
Outcomes of Leadership Scales					
Extra Effort	0.5 ± 0.4	1.1 ± 0.6	-0.5 ± 1.5	6.3 ± 2.6	-1.1 ± 1.5
Effectiveness	1.5 ± 0.4	1.8 ± 0.6	-0.7 ± 1.6	7.8 ± 2.8	-1.4 ± 1.6
Satisfaction	0.6 ± 0.2	0.6 ± 0.4	0.6 ± 0.9	4.4 ± 1.6	-0.5 ± 0.9
OLS ^b Total Differences	2.6 ± 0.9 ^{xy}	3.4 ± 1.5 ^{xy}	-0.6 ± 3.7 ^{xy}	18.5 ± 6.4 ^x	-3.1 ± 3.7 ^y

^a TFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).

^b OLS is the sum of sub-scores from individual outcomes of leadership characteristic scales (i.e. Extra Effort, Effectiveness, Satisfaction).

^{x,y} Means not sharing a common superscript on rows are significantly different, Tukey-Kramer test P<0.05.

Table 4. Subordinate TFS^a and OLS^b Scales and Total Scores by Manager's Time in Current Position

	≤ 5 Years	6-11 Years	≥12 Years
	(n=41, 53.3%)	(n=12, 15.6%)	(n=23, 29.9%)
Transformational Leadership Scales	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE
Idealized Influence—Attributed	11.3 ± 0.4	12.7 ± 0.7	10.9 ± 0.5
Idealized Influence—Behavior	10.9 ± 0.3	12.0 ± 0.6	10.6 ± 0.5
Inspirational Motivation	11.9 ± 0.4 ^{xy}	12.9 ± 0.6 ^x	10.8 ± 0.5 ^y
Intellectual Stimulation	10.4 ± 0.4	11.7 ± 0.7	9.9 ± 0.5
Individual Consideration	10.7 ± 0.4 ^{xy}	12.3 ± 0.7 ^x	10.1 ± 0.5 ^y
TFS ^a Total	55.2 ± 1.7	61.6 ± 3.2	52.4 ± 2.3
Outcomes of Leadership Scales			
Extra Effort	8.2 ± 0.3	9.1 ± 0.6	7.6 ± 0.4
Effectiveness	11.9 ± 0.4	13.0 ± 0.8	11.4 ± 0.6
Satisfaction	5.9 ± 0.2	6.7 ± 0.4	5.8 ± 0.3
OLS ^b Total	26.0 ± 0.9	28.7 ± 1.7	24.8 ± 1.3

^a TFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).

^b OLS is the sum of sub-scores from individual outcomes of leadership characteristic scales (i.e. Extra Effort, Effectiveness, Satisfaction).

^{x,y} Means not sharing a common superscript on rows are significantly different, Tukey-Kramer test P<0.05.

Table 5. Mean Subordinate-Rated TFS^a and OLS^b Scales and Total Scores Based on Level of Subordinate Job Enjoyment

	<i>In general, I enjoy my job...</i>					
	Strongly Agree	Agree	Somewhat Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
	(n=150, 38.9%)	(n=185, 47.9%)	(n=40, 10.4%)	(n=4, 1.0%)	(n=4, 1.0%)	(n=1, 0.3%)
	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE
Transformational Leadership Scales						
Idealized Influence—Attributed	12.6 ± 0.3 ^v	11.2 ± 0.2 ^{wxy}	10.4 ± 0.5 ^{wx}	6.3 ± 1.7 ^{xy}	6.5 ± 1.7 ^{wxy}	0.0 ± 3.3 ^{xy}
Idealized Influence—Behavior	12.3 ± 0.3 ^v	10.7 ± 0.2 ^{wx}	10.2 ± 0.5 ^{wx}	6.2 ± 1.6 ^{wx}	9.5 ± 1.6 ^{vwx}	1.0 ± 3.1 ^x
Inspirational Motivation	13.0 ± 0.3 ^v	11.6 ± 0.2 ^{wx}	10.6 ± 0.5 ^{wx}	6.5 ± 1.6 ^x	9.5 ± 1.6 ^{vwx}	1.0 ± 3.3 ^x
Intellectual Stimulation	11.5 ± 0.3 ^v	10.1 ± 0.3 ^{wx}	10.1 ± 0.5 ^{wx}	5.7 ± 1.7 ^{wx}	6.8 ± 1.7 ^{vwx}	0.0 ± 3.4 ^x
Individual Consideration	12.0 ± 0.3 ^{vx}	10.2 ± 0.3 ^{wxyz}	10.3 ± 0.5 ^{wxy}	7.3 ± 1.7 ^{vwxyz}	5.1 ± 1.7 ^{xyz}	-0.0 ± 3.5 ^{yz}
TFS ^a Total	61.5 ± 1.2 ^v	53.9 ± 1.1 ^{wxy}	51.7 ± 2.3 ^{wx}	31.9 ± 7.4 ^{xy}	37.4 ± 7.4 ^{wxy}	2.0 ± 17.7 ^{xy}
Outcomes of Leadership Scales						
Extra Effort	9.3 ± 0.2 ^v	7.8 ± 0.2 ^{wxy}	7.4 ± 0.5 ^{wxy}	6.1 ± 1.5 ^{vwxy}	3.0 ± 1.5 ^x	1.0 ± 2.9 ^{vwxy}
Effectiveness	13.5 ± 0.3 ^v	11.4 ± 0.3 ^{wx}	10.9 ± 0.6 ^{wx}	9.0 ± 1.8 ^{vwx}	5.5 ± 1.8 ^x	1.0 ± 3.5 ^x
Satisfaction	6.7 ± 0.2 ^v	5.8 ± 0.1 ^{wx}	5.4 ± 0.3 ^{wx}	4.5 ± 1.0 ^{vwx}	2.5 ± 1.0 ^x	-0.0 ± 2.0 ^{wx}
OLS ^b Total	29.5 ± 0.6 ^v	25.0 ± 0.6 ^{wxy}	23.7 ± 1.2 ^{wx}	19.6 ± 3.9 ^{vwxy}	11.0 ± 3.9 ^{xy}	2.0 ± 7.8 ^{wxy}

^a TFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).
^b OLS is the sum of sub-scores from individual outcomes of leadership characteristic scales (i.e. Extra Effort, Effectiveness, Satisfaction).
^{v,w,x,y,z} means not sharing a common superscript on rows are significantly different, Tukey-Kramer test P<0.05.

**APPENDIX A: COMPLETE INTRODUCTION
AND LITERATURE REVIEW**

INTRODUCTION

Overview

Managers and Leaders

“Management is doing things right; leadership is doing the right things.”

–Peter F. Drucker (1)

Managers exist in many different dietetics settings. From clinical nutrition managers in hospitals to directors of government nutrition programs, managers can do more than just manage resources. They can also be leaders. Kunkel (2) defined leadership as “the ability to inspire and guide others toward building and achieving a shared vision.”

While managers fill many different roles, Mintzberg (3) states that the role of leader is the manager’s most significant role because leadership permeates all activities. The field of dietetics needs managers who are more than just effective resource managers. The field of dietetics needs leaders to shape the future of dietetics. In order to create better leaders, an understanding of what makes leaders effective is needed.

Transformational Leadership

Recent leadership theories point to “transformational” leadership characteristics as being effective and resulting in positive outcomes (4, 5). Transformational leaders empower followers and can shape their motives, values, and goals (6). Because managers who are evaluated as top performers exhibit characteristics of transformational leadership (4, 5), this cluster of leadership behaviors was used as the standard for this investigation.

Evaluation and Self-Perception

Traditionally, managers perform “top-down” evaluations of subordinates. In recent years, multi-source evaluation has become more prevalent. Multi-source evaluation, often referred to as a “360-degree evaluation,” involves individuals with varying relationships (subordinates, peer, supervisor, internal and external customers) to the person being evaluated providing feedback (7, 8).

One important component of this multi-source evaluation is the subordinate evaluation of the manager. Because subordinates work closely with their direct manager, they often have a unique perception of the manager’s behavior. As a group, they can provide a collective evaluation of the manager’s behavior. Though this type of feedback can be used for administrative decisions, most often, this type of feedback is used for developmental purposes (8).

However upward evaluation is implemented, a common phenomenon occurs. Often the managers rating of themselves and the collective rating of the subordinates do not agree. In other words, leaders often do not have an accurate perception of their own behavior. Drucker (9) wrote “Most people think they know what they are good at. They are usually wrong.” Previous research (10, 11) has shown a difference in this perception gap by the group surveyed. Smaller discrepancies between leader and follower perceptions were found in those who receive frequent evaluation from their followers (college instructors) than in traditional managers (11).

Objective

The purpose of this investigation is to assess the effect of upward feedback on the perception gap of self-rated and subordinate-rated managerial behavior scores using the Multifactor Leadership Questionnaire (MLQ) in the dietetic management setting. If the use of

upward feedback from subordinate to manager is related to increased self-awareness and improved managerial performance in a dietetic management setting, upward feedback could be a strategy to improve workplace environments through improving managers.

Hypotheses

1. Formal upward evaluation will narrow the perception gap of manager and subordinate views of managerial behavior as measured by the MLQ.
2. Managers in facilities using formal upward evaluation will have higher subordinate-rated MLQ scores than managers in facilities not using formal upward evaluation.
3. Managers who actively implement subordinate feedback will have higher subordinate-rated MLQ scores than those who do not actively implement subordinate feedback.
4. Managers with longer tenures will have higher subordinate-rated MLQ scores.
5. Increased subordinate-job enjoyment scores will be positively related to increased subordinate-rated MLQ scores.

Limitations

One limitation of this study is that the role that subordinate evaluations play in merit-based decisions was not measured. Measuring the impact subordinate evaluations have on manager promotion, pay increase, or other merit-based decisions may have provided more insight to the topic.

Definitions

Clinical Nutrition Manager (CNM): One of the two types of managers in this study. These managers supervise the “Clinical” subordinates.

Director of Food and Nutrition Services (DFNS): One of the two types of managers in this study. These managers supervise the “Foodservice” subordinates.

Manager: If not designated as above, the term refers to both types of managers in this study.

Multifactor Leadership Questionnaire (MLQ): This tool measures perceptions of leadership behavior. Managers are asked questions about their personal management behavior.

Subordinates are asked questions about their manager's behavior.

Perception Gap: The difference between the manager and subordinate perception of the manager's behavior.

Upward Feedback: This refers to the evaluation method where subordinates consistently and formally evaluate their managers.

LITERATURE REVIEW

Management and Leadership

Defining Management and Leadership

Managers are responsible for planning, organizing, staffing, leading, and controlling (12). Mintzberg (3) states that the role of leader is the manager's most significant role because leadership permeates all activities. And while a manager plays several roles within an organization, Mintzberg (13) states "the influence of the manager is most clearly seen in the leader role."

Though leadership is clearly part of management, Kotter (14) argues that management and leadership are separate but complementary functions. Kotter theorizes that leadership responsibilities complement management responsibilities. While management focuses on dealing with complexities and details, leadership focuses on dealing with change. Kotter has paired these management and leadership responsibilities as follows: planning and budgeting are complemented by setting direction and providing vision; organizing and staffing are complemented by aligning people with their best responsibilities; controlling and problem solving are complemented with motivating individuals (14). Both management and leadership are required for the success of any organization.

Clearly, management and leadership are connected. Effective managers need to know and understand motivational theories, and effective leaders need a management style that inspires followers (15).

Leadership Theories

Many leadership theories attempt to explain leader behavior and attitudes. Early studies on leadership focused on traits of leaders. In the early 1900's, researchers focused on identifying effective and successful leader traits. The "Big Five" model is a trait theory that categorized leadership personality traits into five groups (16, 17).

Behavior-focused research began in the 1950's with an effort to find the most effective leadership style. One result of the research produced during this era is the Managerial Grid, which categorizes managers based on their concern for their subordinates and concern for the production of their unit (12, 18, 19, 20).

Categories of more recent leadership theories include:

- Power/Influence: theories suggesting that leaders have different types of power as well as influence over subordinates (19, 21, 22),
- Contingency/Situational: a group of approaches dealing with how the leader's effectiveness is affected by different situations (19, 23, 24), and
- Reciprocal Approaches: theories that focus on interactions between leaders and followers (19, 25, 26, 27).

Within the reciprocal approach fall both transactional and transformational leadership.

The theory that combines both transactional and transformational leadership styles is the Full-Range of Leadership model (19, 25, 26). Though each of these theories and the research behind them show differing views on leadership, each provides additional insight into leadership theory.

Full-Range of Leadership Model

Burns and Bass (25) theorize that in various situations leaders may exhibit different leadership styles or strategies, specifically transformational and transactional. For example, a leader exhibits transactional behavior by rewarding a subordinate for the completion of a task,

and the same leader exhibits transformational behavior by encouraging the group to work toward a common goal.

Transactional and transformational leadership styles can be thought of as contrasting styles, however they can also be viewed as complementary. Transactional leadership can also be viewed as a basic set of behaviors and transformational leadership as a higher level of behavior. Most individuals operate on a transactional basis, while few take the next step to develop transformational qualities to improve and lift their followers (26). The combination of both the transactional and transformational leadership, along with components of laissez-faire is found in the Full-Range of Leadership model (26).

Transactional Leadership. Transactional leadership is focused on the exchange that takes place in order for both leader and follower to achieve separate, but related goals. This type of leadership is the reciprocal process of mobilizing resources to achieve goals (26). Transactional leadership can be categorized into two sub-categories of Contingent Reward and active Management-by-Exception (28).

Contingent Reward, when used constructively, can be moderately effective. An example of using contingent reward is used when the leader assigns a subordinate a task and promises rewards for the successful completion of the task (25, 28).

Management-by-Exception can be divided into active and passive categories. Active Management-by-Exception is characterized by a leader specifying standards and punishing followers for being out of compliance with the standards (28). This active form of Management-by-Exception is characterized by the manager actively monitoring mistakes and errors and then taking action to resolve the issues as quickly as possible. Passive Management-by-Exception is characterized by managers delaying corrective action until problems become serious (28).

Laissez-Faire Leadership is also classified under the transactional style. This lack of leadership is the most ineffective style of leadership, and is characterized by avoiding leadership and management responsibilities (25, 28).

Transformational Leadership. Although at times transactional leadership is appropriate, for highest leadership effectiveness, transformational leadership qualities are suggested. Burns (6) states that transformational leaders can, “shape and alter and elevate the motives and values and goals of followers through the vital *teaching* role of leadership.” The concept of transformational leadership centers on leaders empowering their followers. Transformational leaders create vision, act as agents of change, and shape the culture of their organization (29). The four key aspects of transformational leaders include Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individual Consideration (26, 28).

Idealized Influence is the measure of how much a subordinate looks up to the leader as a role model. Because leader’s attributes and behavior can be viewed differently, two sub-scores are used to measure idealized influence: Idealized Influence—Attributed (IIA) and Idealized Influence—Behavior (IIB) (26).

Inspirational Motivation (IM) is exhibited when a leader creates an atmosphere of enthusiasm and optimism. Leaders who have higher Inspirational Motivation scores provide meaning and challenge for their followers (26).

Intellectual Stimulation (IS) is provided by a leader who creates an environment where creativity and problem solving are encouraged. Followers are encouraged to look at problems in new ways and are not criticized for mistakes (26).

Leaders who demonstrate **Individualized Consideration** (IC) behaviors pay attention to individuals and provide individualized experiences in order to guide and coach the followers to reach their potential (26).

The tool used to measure these qualities and perceptions of both transactional and transformational leadership is the Multifactor Leadership Questionnaire (MLQ) (26, 28).

Multifactor Leadership Questionnaire

The MLQ has been used extensively in leadership research and has been tested for validity and reliability. It is used in many different disciplines and across all levels of organizations, from top management positions to line workers (26).

The purpose of the MLQ is to measure perceptions of leadership behavior across the Full-Range of Leadership (26). Managers report their own perceived behavior, while subordinates record their perceptions of the managers' behavior. The full range of leadership behaviors are measured and categorized ranging from Laissez-Faire to Idealized Leadership, while also distinguishing ineffective from effective leaders (26, 28).

The MLQ measures four different categories of leadership:

- Transformational Leadership
- Transactional Leadership
- Passive/Avoidant Leadership
- Outcomes of Leadership

Each of these categories has sub-factors. The total score received in each of these categories leads to a classification of the leader's behavior. Transformational leaders are characterized by having higher scores in the Transformational Leadership category and lower scores in the Transactional Leadership and Passive/Avoidant Leadership categories (28).

Because some elements of transactional leadership can be constructive and positive, transactional leadership is measured separately from passive/avoidant leadership.

Performance Evaluation

In addition to leading, staffing is another important role of a manager. A specific function of staffing is performance evaluations or appraisals (12). Feedback has many purposes; among the many, feedback from evaluations can motivate and direct behavior, contribute to increased self-awareness, and improve service quality. Evaluations can also be used to make administrative decisions (such as promotions, bonuses, and pay raises), as well as be used for developmental purposes (8).

Traditionally, managers evaluate their subordinates. Those same managers are evaluated by their superiors, creating an environment in which individuals are only rated by those superior to them, rather than those with whom they work most closely (7). In recent years, alternative methods to this “top-down” or “downward” evaluation style have been implemented (7).

Multiple Source Evaluation

Though traditional evaluations include feedback from only superiors, evaluations can also include feedback from multiple sources. Multiple source evaluation is defined by Foster and Law (30) as “a process through which an individual receives personalized feedback from two or more raters.” One specific type of multiple source evaluation is the “360° evaluation.” This type of evaluation involves feedback from superiors, subordinates, peers, and internal and external customers (7, 8). This type of feedback is important because it demonstrates the use of upward evaluation of managers by their subordinates.

Multiple source evaluations are typically used for developmental purposes. Companies such as IBM, Dow Chemical, Hallmark, and AT&T use 360° evaluations as a tool to improve

performance (31, 32). However, these types of evaluations may also be used as part of some administrative decisions (8).

Upward Evaluation

While multi-source evaluation involves many feedback perspectives, upward evaluation focuses on the feedback given to the manager from the subordinate. Upward evaluation is a relatively new approach and has only become moderately popular in the last two decades.

Because subordinates generally interact more frequently with managers than managers interact with their superiors, this makes feedback from subordinates very valuable in evaluating the manager. Results of studies that have been completed in the area of performance improvement and upward feedback show encouraging results. Hegarty (33) found significant positive changes in supervisor behavior when supervisors were given feedback by their employees. Atwater et al. (34) also found that upward feedback increases the manager's performance. This increase in performance is likely related to a more accurate self-perception.

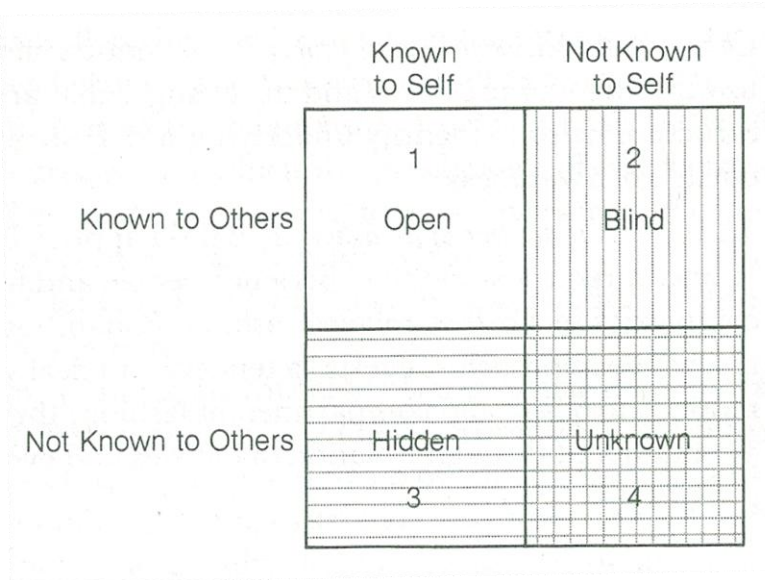
Self-Perception

The concept individuals have of themselves is related to the feedback they receive from many levels. As a manager, feedback from superiors, subordinates, peers, and customers contribute to this self-concept or perception of oneself.

Self-Perception Model

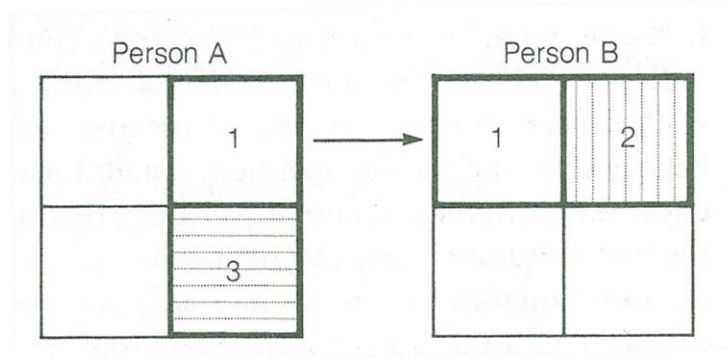
Luft and Ingham (35) created a model of interpersonal behavior referred to as the Johari Window, whose four quadrants represent the total person in relation to other persons. They postulated that there are four quadrants of perceptions, the first of which is information that is known to oneself and others (public or open), the second which is known to others but not

oneself (blind), the third which is only known to oneself (private), and the fourth which is known neither to oneself or others (unknown) (35). See figure below (35).



This simple model draws upon consciousness and awareness; consciousness referring to what is felt inside oneself and awareness referring to what is perceived outside of oneself (35). Because individuals have differing degrees of awareness and consciousness, the “size” of the quadrants may differ between individuals. Disclosure and feedback are two tools to increase the size of the open or public window. As one discloses or shares information with others, the size of the “hidden” window decreases. And as one receives feedback from others, the size of the “blind” window decreases (35).

It’s also important to understand which windows are included when two people interact. Person A, using their frame of reference, the open and hidden quadrants, perceives both the open and blind quadrant of person B, as seen in the figure below (35).



Self-Perception Gap

Drucker (9) said, “Most people think they know what they are good at. They are usually wrong.” For many, the idea they have of their own behavior does not agree with the idea or perception that others have of their behavior. As explained by Johari’s window, individuals have a “blind spot” in which they do not fully comprehend elements of their behavior.

One way to improve self-awareness in the workplace is via evaluation from those who work closely with the individual being rated. When rating oneself, generally people evaluate themselves in a way that at least maintains their self-image; most people are lenient when rating themselves, leading to an overrating of their behaviors (8). This creates a gap between how the manager views his/her behavior and how the subordinate views the manager’s behavior.

Many studies (4, 10, 11) have shown that this gap exists. Within the dietetics field, Sarver (10) found a significant difference between the manager and employee perceptions of the manager’s behavior in hospital settings. Tapahe (11) also found differences between instructor and student perceptions of the instructor’s behavior in dietetic education settings. However, Tapahe’s differences were smaller than Sarver’s differences.

London (8) has concluded that the discrepancies between self-ratings and feedback from others should help people understand that their behavior needs to change. London also states that change is most likely to happen when ratings from self and others are unfavorable.

However, when self-perceptions are favorable and feedback from others is unfavorable, individuals may not see the need to change (8).

Many studies have shown upward feedback to be an important tool to highlight this self-perception gap (11, 33, 34). However, evidence also shows that depending on the circumstances, the upward feedback may not prompt the superior to improve his/her behavior (8).

Performance Related to Self-perception Gap. Mintzberg (3) said that, “the manager’s effectiveness is significantly influenced by his insight into his own work.” As feedback is given to managers from subordinates, this upward feedback can improve the accuracy of their self-image over time (8). As the gap narrows and the manager has a more accurate view of his/her behavior, the performance of the manager improves.

In a study done in the Air Force, those with higher self-rater agreement, meaning the gap between how the manager viewed his/her behavior and how the subordinates viewed the manager’s behavior was small, had higher promotion rates (4). This implies that performance increases when managers have a more realistic view of their behavior.

This realistic view of behavior is supplemented by the use of upward feedback. London (8) noted that annual and semiannual performance reviews, although important, do not replace the value of specific, frequent, and behaviorally focused feedback throughout the year. Frequent feedback paired with the formal reviews help to improve self-rating accuracy (8).

Management in Dietetics

Management Research in Dietetics

Consistent with other views of leadership, the American Dietetic Association shared its view of leadership as being “the ability to inspire and guide others toward building and achieving a shared vision” (2). This outlook on leadership is highly similar to the Transformational

Leadership style presented earlier. While leadership research in other disciplines has been published since the early 1900's, leadership research in the dietetics discipline is limited.

Perception Gaps in Dietetics Management Research. Looking specifically at the relationship of managers to their subordinates and vice versa, an interesting phenomenon has been found in dietetic settings. Directors of Food and Nutrition Services (DFNS) as well as Clinical Nutrition Managers (CNM) were assessed using the Multifactor Leadership Questionnaire (MLQ) in a study by Sarver (10). Sarver found a statistically significant perception gap of manager and subordinate views of managerial behavior as measured by the MLQ. The managers rated themselves higher than did the subordinates. The largest difference was found on the Individual Consideration (IC) scale, where 95.4% of managers reported that *they consider an individual as having different needs, abilities, and aspirations from others*, but only 49.7% of employees perceived that their manager fit this description. Gaps in perception were also found on the Idealized Influence—Attributed (IIA), Individualized Influence—Behavior (IIB), Inspirational Motivation (IM), Intellectual Stimulation (IS), and Individual Consideration (IC) scales (10).

In an educational setting, Tapahe (11) studied the differences in perceptions between dietetics faculty members and their students in the classroom. Tapahe found that though a difference in perceptions still existed, the gap was much smaller in the educational setting than in the hospital setting (11).

Exhibit 1. Mean Differences in Scales and Total Scores Between Instructors and Students in Dietetics Education Compared to Differences Between Managers and Employees in the Hospital Setting

	Differences between Instructor and Student Scores in Tapahe ⁽¹¹⁾ Study	Differences between Manager and Employee Scores in Sarver ⁽¹⁰⁾ Study
Transformational Leadership Scales	LS Mean ± SE	LS Mean ± SE
Idealized Influence—Attributed	-0.5 ± 0.4 ^x	0.8 ± 0.3 ^y
Idealized Influence—Behavior	1.2 ± 0.4	2.0 ± 0.3
Inspirational Motivation	-0.1 ± 0.4 ^x	1.3 ± 0.3 ^y
Intellectual Stimulation	0.5 ± 0.4 ^x	2.2 ± 0.3 ^y
Individual Consideration	2.1 ± 0.4	3.0 ± 0.3
TFS ^a Total Differences	3.1 ± 1.6 ^x	9.6 ± 1.2 ^y

^aTFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).
^{x,y} Means not sharing a common superscript on rows are significantly different, Tukey-Kramer P<0.05.

Exhibit 1 shows the mean differences in sub-scale and total scores between instructors and students in an education setting and between managers and employees in a hospital setting. Significant differences between Tapahe’s (education) group and Sarver’s (hospital) group were found on all scales, except the IIB. Comparing the TFS Total Differences scores, the score for the hospital group was significantly higher than the score for the education group (11). This implies that the instructors had a smaller self-perception gap than did the hospital managers.

When examining both settings, a clear difference is evident in the routine evaluation practices. In the DFNS and CNM group, it is assumed that most evaluation and communication occurred from the manager to the subordinate, in a “downward” flow. On the other hand, in the classroom setting, a large amount of feedback flowed in the opposite direction, with the evaluation going from the subordinate (student) to the manager (teacher), in an “upward” direction through formal course/instructor evaluation.

The present study is designed as a follow-up to the studies conducted by Sarver and Tapahe (10, 11). The purpose of this investigation is to further explore the effects of upward feedback in the dietetics management setting.

If upward communication from subordinate to manager is related to increased self-awareness and improved managerial performance, subordinate to manager evaluation could be a strategy to improve workplace environments through improving managers.

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APPENDIX B: COMPLETE METHODS

METHODS

Overview

The study design consisted of two phases. In Phase I, a letter of transmittal and short questionnaire were used to determine the use of upward feedback in the facility. Two groups, Comparison and Feedback, were formed based on their use of upward evaluation or feedback.

During the second phase, both the Comparison and Feedback groups completed the survey instrument. The results of the survey instruments were compared between the two groups.

Procedure

Steps needed to carry out the study included: obtaining IRB approval; conducting a pilot study; distributing Phase I research materials, Phase I follow-up materials, Phase II research materials, and Phase II follow-up materials.

IRB Approval

Approval to conduct this research was obtained from the Institutional Review Board for Human Subjects (IRB) at Brigham Young University (Appendix E). The letter of transmittal, which formed the front page of the questionnaire, informed participants that participation was voluntary and that informed consent was implied if they completed and returned the survey

Pilot Study

A pilot study was conducted to test the survey instrument and procedures. Three of six hospitals contacted within the 200-499 beds hospital size responded. Pilot Study Materials and Research Components (see below) were sent to each hospital:

Pilot Study Materials:

- A cover letter containing instructions for the pilot study and for the evaluation of the research components (Appendix F)
- An evaluation tool for the pilot study (Appendix F)

Research components:

- **Phase I**

- **Initial Letter of Transmittal:** The letter explained the purpose and basic structure of the study. Participants were informed of their rights and provided contact information if they had questions about the study. (See Appendix G)
- **Performance Evaluation Postcard:** The questionnaire requested the following information:
 - Hospital Name, DFNS and CNM Contact Names and Email Addresses
 - Indication of upward evaluation use
 - Frequency of upward evaluation
 - Length of organizational upward evaluation use
 - Origination of upward evaluation process (See Appendix G)

- **Phase II**

- **Questionnaire Request Email Message:** The purpose of the email message was to obtain the number of English and Spanish subordinate questionnaires needed for each individual manager. Because the DFNS provided the email for the CNM, a short explanation including the IRB approval was included in the email to the CNM. (See Appendix H)
- **Manager Letter of Transmittal and Questionnaire:** Two versions of the manager letter of transmittal were used. The DFNS letter of transmittal gave examples of subordinates, including clerical and support staff, supervisors, and managers, and also instructed the DFNS to exclude the CNM as a subordinate. The CNM letter of transmittal included specific examples of CNM subordinates including dietitians, dietetic technicians, and other support staff. Both DFNS and CNM questionnaires included the same content. The questionnaire consisted of three main parts: 1) demographics, 2) feedback practices, 3) Multifactor Leadership Questionnaire (28). (See Appendix H)
- **Subordinate Letter of Transmittal Questionnaire:** An English and Spanish version of the letter of transmittal and questionnaire were used. The subordinate questionnaire consisted of three main parts: 1) demographics, 2) feedback practices, 3) Multifactor Leadership Questionnaire (28). (See Appendix H)

Based on the pilot study feedback, the survey instruments were slightly refined. The postcard was modified into a half-sheet questionnaire to be returned in a business-reply envelope to provide more security for the contact information that was being shared. Formatting of Phase II questionnaires were also slightly modified.

Phase I

Sample. Directors of Food and Nutrition Services (DFNS) in hospitals of 200-499 bed size from the American Hospital Association Database were surveyed. This hospital size was chosen because hospitals with fewer beds are likely to have managers with very few subordinates, while hospitals with larger sizes are more likely to have multiple levels of managers. This hospital size was also used by Sarver (10), which allowed comparison of study results with Sarver's results.

Distribution of Research Materials. Initial letters were sent to DFNS within the sample population asking for their participation in the study. A brief questionnaire to determine the use of upward feedback and obtain contact information for both the DFNS and CNM was included. Upon receipt of completed questionnaires, participants were assigned to either the Feedback or Comparison group, based on their use of formal upward evaluation. Criteria for being placed in the Feedback group included using formal, upward evaluation at least once per year and having the practice in place for at least one year prior to the research study.

Follow-Up. Follow-up letters were sent to those who had not responded to the initial mailing seven weeks prior. The mailing included a copy of the survey and a card providing the web address where the complete letter of transmittal and an online survey were located. The online version was used to expedite the process of receiving the responses of Phase I.

Phase II

Sample. Respondents from Phase I were divided into either the Feedback or Comparison group based on their use of a formal upward evaluation process.

Distribution of Research Materials. The Questionnaire Request Email was sent to the DFNS and CNM to determine the number of English and Spanish survey instruments (translated by *inlingua*, Salt Lake City, Utah) needed for subordinates. Once the response including the number of surveys needed was received, the corresponding number of manager and subordinate letters of transmittal and questionnaires were sent. Participants were asked to return the survey instrument within two weeks.

Follow-Up. For both the comparison and feedback groups, a follow-up email was sent to study participants four weeks after research materials were mailed. This email was sent only to those whose responses had not been received. A second follow-up email was sent to study participants if questionnaires were not received within four weeks of the first follow-up email.

The final follow-up included a replacement packet of questionnaires and an email. The replacement packet included the number of surveys that had not been returned. The email alerted the manager to the packet that would be arriving in the mail.

Statistical Analysis

All statistical analyses were carried out using the SAS statistical analysis computer software (Version 9.2, Cary, NC). Frequency data were obtained for all survey questions for both managers and subordinates.

The Transformational Leadership Score (TFS) was found by combining the scores for the five sub-scales measuring transformational leadership characteristics. The score, ranging from 0

(not at all) to 4 (frequently, if not always), for the sub-scales Idealized Influence (Attributed) (IIA), Idealized Influence (Behavioral) (IIB), Inspirational Motivation (IM), Intellectual Stimulation (IS), and Individualized Consideration (IC) were totaled for the TFS, with possible scores ranging from 0-80.

Means and frequencies for the TFS, TFS sub-scores (IIA, IIB, IM IS, and IC scores), Outcomes of Leadership Total Score (OLS) and OLS sub-scores (Extra Effort, Effectiveness, Satisfaction) were calculated for both managers and subordinates. Individual question numbers for each of the sub-scores for the Manager and Subordinate Questionnaires are shown in Exhibit 2.

Exhibit 2. Four Categories of Leadership Measured by MLQ, by Sub-Factor and Corresponding Question Numbers for Manager and Subordinate Questionnaires

Transformational Leadership	Transactional Leadership	Passive/Avoidant Leadership	Outcomes of Leadership
<i>Idealized Influence (Attributed)</i> Mgr: 28, 36, 39, 43 Sub: 23, 31, 34, 38	<i>Contingent Reward</i> Mgr: 19, 29, 34, 53 Sub: 14, 24, 29, 48	<i>Management-by-Exception (Passive)</i> Mgr: 21, 30, 35, 38 Sub: 16, 25, 30, 33	<i>Extra Effort</i> Mgr: 57, 60, 62 Sub: 52, 55, 57
<i>Idealized Influence (Behavior)</i> Mgr: 24, 32, 41, 52 Sub: 19, 27, 36, 47	<i>Management-by-Exception (Active)</i> Mgr: 22, 40, 42, 45 Sub: 17, 35, 37, 40	<i>Laissez-Faire</i> Mgr: 23, 25, 46, 51 Sub: 18, 20, 41, 46	<i>Effectiveness</i> Mgr: 55, 58, 61, 63 Sub: 50, 53, 56, 58
<i>Inspirational Motivation</i> Mgr: 27, 31, 44, 54 Sub: 22, 26, 39, 49	-----	-----	<i>Satisfaction</i> Mgr: 56, 59 Sub: 51, 54
<i>Intellectual Stimulation</i> Mgr: 20, 26, 48, 50 Sub: 15, 21, 43, 45	-----	-----	-----
<i>Individualized Consideration</i> Mgr: 33, 37, 47, 49 Sub: 28, 32, 42, 44	-----	-----	-----

To assess the perception gap, differences for the manager and subordinate scores were found by subtracting the manager score from the average subordinate score. General Linear

Model (GLM) was used to determine the relationship between TFS and OLS scores, TFS and OLS sub-scores, differences between manager and subordinate scores and sub-scores, and questions of interest, such as job enjoyment, time in current position, time in all management positions, and other demographic variables.

Tukey-Kramer was used to determine the pair-wise differences in the means of sub-scores and scores between the current study groups (Feedback and Comparison), Sarver (10), and Tapahe (11) results.

APPENDIX C: COMPLETE RESULTS

RESULTS

Directors of Food and Nutrition Services at all of the 1,331 hospitals in the American Hospital Association database with bed size 200-499 were invited to participate in the survey. Of these, 250 responded to Phase I (18.8%). Sixteen Phase I surveys were completed online.

Of the 250 facilities that responded to Phase I, 81 managers responded in Phase II. However, to be included in the analysis, the manager's and at least one of the corresponding subordinate's questionnaires had to be received. Seventy-seven managers were eligible to be included in the Phase II analysis (30.8% of Phase I respondents). Determining the exact subordinate response rate is not possible because the number of subordinate surveys distributed by managers is not known.

Feedback and Communication Group Demographics

Based on Phase I responses, the managers were divided into two groups according to their use of formal, upward feedback. The majority of managers participated in traditional evaluation practices and were assigned to the Comparison group. Those who participated in upward evaluation practices were assigned to the Feedback group. Of those assigned to the Feedback group, 90% reported using formal, upward evaluation practices at least once per year in the Phase I responses, with 10% using it more often. Eighty-six percent had been using upward evaluation for over a year, with 14% using it for only one year. The formal, upward evaluation practice originated from a variety of sources; 43% reported the hospital level, 33% reported the corporation level, 29% reported other sources, 5% reported the department as the source of origination.

Demographics of Sample

As shown in Table 1, the majority of managers who completed Phase II were CNM. The majority of both managers and subordinates were White and female. The greatest percentage of managers fell into the 51-60 age group, while subordinates were more evenly distributed across all age groups.

The majority (55.9%) of managers held a Master's or Doctoral degree, while the greatest percentage of subordinates (47.2%) had an Associate's or Bachelor's degree. Most managers and subordinates were Registered Dietitians. The largest percentage of managers had salaries from \$60,000-\$79,999. The largest percentage of subordinates had salaries in the range of \$40,000-\$59,000. Most managers and subordinates work full time.

Job-Related Questions

Managers and subordinates were also distributed equally over the ranges of time in their current position, with the greatest percentage of both managers and subordinates being in their current position ≤ 5 years. However, the majority of managers had been in any management position ≥ 11 years. The majority of managers (93.5%) and subordinates (86.8%) agreed or strongly agreed with the statement *I enjoy my job*.

Table 1. Demographic Characteristics by Group

Characteristic	All Respondents				Feedback Group				Comparison Group			
	Managers		Subordinates		Managers		Subordinates		Managers		Subordinates	
	n	%*	n	%*	n	%*	n	%*	n	%*	n	%*
Manager Type												
DFNS	30	39.0	130	33.7	9	42.9	30	30.9	35	62.5	100	34.6
CNM	47	61.0	256	66.3	12	57.1	67	69.1	21	37.5	189	65.4
Evaluation Style												
Traditional	56	72.7	289	74.8	--	--	--	--	56	100.0	289	100.0
Upward	21	27.3	97	25.1	21	100.0	97	100.0	--	--	--	--
Ethnicity												
African American	--	--	11	2.8	--	--	2	2.1	--	--	9	3.1
Asian and Pacific Islander	2	2.6	14	3.6	--	--	5	5.2	2	3.6	9	3.1
Latino/Hispanic	--	--	11	2.8	--	--	6	6.2	--	--	5	1.7
Native American	--	--	3	0.8	--	--	1	1.0	--	--	2	0.7
White	73	94.8	334	86.5	20	95.2	81	83.5	53	94.6	253	87.5
Other	1	1.3	3	0.8	1	4.8	1	1.0	1	1.8	2	0.7
Gender												
Female	69	89.6	358	92.3	19	90.5	89	91.8	50	89.3	269	93.1
Male	8	10.4	26	6.7	2	9.5	8	8.3	6	10.7	18	6.2
Age												
18-20	--	--	4	1.0	--	--	2	2.1	--	--	2	0.7
21-30	6	7.8	113	29.3	2	9.5	22	22.7	4	7.1	91	31.7
31-40	15	19.5	57	14.8	2	9.5	16	16.5	13	23.2	41	14.3
41-50	20	26.0	89	23.1	5	23.8	26	26.8	15	26.8	63	22.0
51-60	25	32.5	96	24.9	8	38.1	24	24.7	17	30.4	72	25.1
60+	9	11.7	25	6.5	4	19.1	7	7.2	5	8.9	18	6.3

Table 1. Demographic Characteristics by Group Continued

Characteristic	All Respondents				Feedback Group				Comparison Group			
	Managers		Subordinates		Managers		Subordinates		Managers		Subordinates	
	n	%*	n	%*	n	%*	n	%*	n	%*	n	%*
Education												
Less than College	--	--	80	20.7	--	--	25	25.8	--	--	55	19.0
Associate/Bachelor's Degree	20	26.0	182	47.2	4	19.1	50	51.5	16	28.4	132	45.7
Some post-grad, but no degree	14	18.2	53	13.7	6	28.6	7	7.2	8	14.3	46	15.9
Master's/Doctoral Degree	43	55.9	67	17.3	11	52.4	15	15.5	32	57.1	52	18.0
RD Status												
Registered Dietitian	70	90.0	243	63.0	19	90.5	55	56.7	51	91.1	188	65.1
Dietetic Technician, Registered	1	1.3	18	4.7	1	4.8	7	7.2	--	--	11	3.8
Other	3	3.9	65	16.8	1	4.8	22	22.7	2	3.6	43	14.9
Pay/Year												
\$5,000-\$19,999	--	--	56	14.5	--	--	14	14.5	--	--	42	14.5
\$20,000-\$39,999	--	--	147	38.1	--	--	32	33.0	--	--	115	39.8
\$40,000-\$59,999	21	27.3	153	39.6	4	19.0	44	45.4	17	30.3	109	37.8
\$60,000-\$79,999	34	44.2	24	6.2	10	47.6	6	6.2	24	42.9	18	6.3
>\$80,000	21	27.3	--	--	6	28.5	--	--	15	26.8	--	--
Hours/Week												
Full-time	74	96.1	282	73.1	20	95.2	67	69.1	54	96.4	215	74.4
Part-time	3	3.9	101	26.2	1	4.8	28	28.9	2	3.6	73	25.3
Employees Directly Reporting to Manager												
1 to 5	16	20.1			2	9.5			14	25.0		
6 to 10	25	32.5			7	33.3			18	32.1		
11 to 20	18	23.4			6	28.6			12	21.4		
21-30	5	6.5			2	9.5			3	5.4		
31+	13	16.9			4	19.1			9	16.1		

Table 1. Demographic Characteristics by Group Continued

Characteristic	All Respondents				Feedback Group				Comparison Group			
	Managers		Subordinates		Managers		Subordinates		Managers		Subordinates	
	n	%*	n	%*	n	%*	n	%*	n	%*	n	%*
Time in Current Position												
<5 years	41	53.3	220	57.0	7	33.3	54	55.6	34	60.8	166	57.4
6-11 years	12	15.6	67	17.3	4	19.0	16	16.5	8	14.1	51	17.7
≥12 years	23	29.9	96	24.9	9	42.8	26	26.8	14	25	70	24.2
Time in All Management Positions												
<5 years	23	29.9			5	23.8			18	32.2		
6-10 years	10	13.0			3	14.3			7	12.5		
>11 years	43	55.9			12	57.1			31	55.4		
Job Enjoyment												
Strongly Disagree	--	--	1	0.3	--	--	--	--	--	--	1	0.4
Disagree	1	1.3	4	1.0	--	--	1	1.0	1	1.8	3	1.0
Neither Disagree or Agree	--	--	4	1.0	--	--	--	--	--	--	4	1.4
Somewhat Agree	3	3.9	40	10.4	2	9.5	14	14.4	1	1.8	26	9.0
Agree	27	35.1	185	47.9	6	28.6	46	47.4	21	37.5	139	48.1
Strongly Agree	45	58.4	150	38.9	12	57.1	35	36.1	33	58.9	115	39.8

*Totals may not reflect 100% due to non-responses.

Feedback-Related Questions

Interesting relationships were found between managers and subordinate perceptions of giving and seeking feedback. When rating formal, written feedback practices, managers in the two groups rated their behavior differently than reported in Phase I. A relatively large portion of managers in the Feedback group reported they never receive formal, written feedback from their subordinates (Table 2). In contrast, a larger than expected segment of managers in the Comparison group reported they received formal, upward feedback. Subordinates reports also differed from expected, with a large portion of the subordinates in the Feedback group reporting *Never* giving formal, upward feedback to their manager, and a larger than expected portion of the subordinates of the Comparison group reporting that they did give formal, upward feedback.

In an attempt to reclassify managers and subordinates into the Feedback and Comparison groups based on their Phase II responses, it was found that subordinates of the same manager did not report the same feedback practices. Within the same group, some reported giving formal feedback once per year and some never giving formal feedback.

These discrepancies between the Phase I and Phase II responses from the same facilities and disagreement among subordinates show a possible miscommunication within departments regarding evaluation practices.

Table 2. Feedback Characteristics by Group

Characteristic	All Respondents				Feedback Group				Comparison Group			
	Managers		Subordinates		Managers		Subordinates		Managers		Subordinates	
	n	%*	n	%*	n	%*	n	%*	n	%*	n	%*
Subordinate Gives/ Manager Receives Formal Written Feedback												
Not at all (Never to less than once a year)	57	74.0	283	73.4	13	61.9	68	70.1	44	78.6	215	74.4
1-2 times per year	16	20.8	92	23.8	6	28.6	26	26.8	10	17.8	66	22.8
3+ times per year	2	2.6	7	1.8	--	--	2	2.0	2	3.6	5	1.8
Subordinate Gives/ Manager Receives Informal Feedback												
Not at all (Never to less than once a year)	8	10.4	204	52.9	2	9.6	50	51.5	6	10.7	154	53.3
1-2 times per year	22	28.6	88	22.8	4	19.0	25	25.8	18	32.1	63	21.8
3+ times per year	46	59.8	91	23.6	14	66.6	20	20.7	32	57.1	71	24.6
Manager Seeks Feedback												
Not at all (Never to less than once a year)	19	24.7	200	51.8	4	19.1	49	50.5	15	26.7	151	52.3
1-2 times per year	26	33.8	112	29.0	7	33.3	37	38.1	19	33.9	75	26.0
3+ times per year	32	41.6	69	17.9	10	47.6	10	10.4	22	39.3	59	20.4
Manager Values Employee Feedback												
Not Applicable	1	1.3			--	--			1	1.8		
Strongly Agree	50	64.9			14	66.7			36	64.3		
Agree	19	24.7			6	28.6			13	23.2		
Somewhat Agree	3	3.9			1	4.8			2	3.6		
Neither Agree nor Disagree	1	1.3			--	--			1	1.8		
Disagree	--	--			--	--			--	--		
Strongly Disagree	3	3.9			--	--			3	5.4		

Table 2. Feedback Characteristics by Group Continued

Characteristic	All Respondents				Feedback Group				Comparison Group			
	Managers		Subordinates		Managers		Subordinates		Managers		Subordinates	
	n	%*	n	%*	n	%*	n	%*	n	%*	n	%*
Manager Improves Performance based on Employee Feedback												
Not Applicable	1	1.3			--	--			1	1.8		
Strongly Agree	47	61.0			11	52.4			36	64.3		
Agree	24	31.2			9	42.9			15	26.8		
Somewhat Agree	3	3.9			1	4.8			2	3.6		
Neither Agree nor Disagree	--	--			--	--			--	--		
Disagree	--	--			--	--			--	--		
Strongly Disagree	2	2.6			--	--			2	3.6		
Manager Improves Performance based on Manager Feedback												
Not Applicable	--	--			--	--			--	--		
Strongly Agree	54	70.1			14	66.7			40	71.4		
Agree	17	22.1			7	33.3			10	17.9		
Somewhat Agree	2	2.6			--	--			2	3.6		
Neither Agree nor Disagree	1	1.3			--	--			1	1.8		
Disagree	--	--			--	--			--	--		
Strongly Disagree	2	2.6			--	--			2	3.6		

*Totals may not reflect 100% due to non-responses.

Transformational Leadership Scores

The scores from the Multifactor Leadership Questionnaire, including the Transformational Leadership Total Score (TFS), Transformational Leadership sub-scores (IIA, IIB, IM, IS, IC), Outcomes of Leadership Total Score (OLS) and Outcomes of Leadership sub-scores (Extra Effort, Effectiveness, Satisfaction) were determined as explained in the Statistical Analysis. Table 3 shows the frequencies of the MLQ for the Comparison and Feedback groups.

Table 3. Frequency of Manager and Employee Responses to Questions on Manager Transformational Leadership^a and Outcomes of Leadership Characteristics^a by Comparison and Feedback Group

	Not at all ^b				Sometimes ^b				Frequently ^b			
	Comparison		Feedback		Comparison		Feedback		Comparison		Feedback	
	n	% ^c	n	% ^c	n	% ^c	n	% ^c	n	% ^c	n	% ^c
Idealized Influence, Attributed (IIA)												
Manager Responses												
I go beyond self-interest for the good of the group	1	1.8	0	0.0	3	5.4	0	0.0	51	91.1	21	100.0
I act in ways that build others' respect for me	0	0.0	0	0.0	4	7.1	1	4.8	52	92.8	20	95.3
I display a sense of power and confidence	3	5.4	2	9.5	13	23.2	7	33.3	40	71.5	12	57.2
I instill pride in others for being associated with me	2	3.6	1	4.8	12	21.4	8	38.1	42	75.0	12	57.1
Employee Responses												
My director/manager...												
goes beyond self-interest for the good of the group	43	14.9	7	7.2	40	13.8	21	21.7	203	70.2	69	71.2
acts in ways that builds my respect	100	34.6	23	23.7	64	22.2	37	38.1	124	42.9	37	38.2
displays a sense of power and confidence	24	8.3	14	14.5	53	18.3	16	16.5	209	72.3	67	69.1
instills pride in others for being associated with him/her	43	14.9	14	14.5	58	20.1	21	21.7	186	64.3	62	64.0
Idealized Influence, Behavior (IIB)												
Manager Responses												
I consider the moral and ethical consequences of decisions	0	0.0	1	4.8	1	1.8	0	0.0	55	98.2	20	95.2
I emphasize the importance of having a collective sense of mission	2	3.6	1	4.8	13	23.2	3	14.3	41	73.2	17	81.0
I specify the importance of having a strong sense of purpose	5	8.9	1	4.8	14	25.0	5	23.8	37	66.0	15	71.5
I talk about my most important values and beliefs	2	3.6	4	19.1	19	33.9	4	19.1	35	62.5	13	62.0
Employee Responses												
My director/manager...												
considers the moral and ethical consequences of decisions	22	7.6	4	4.1	38	13.2	13	13.4	226	78.2	80	82.5
emphasizes the importance of having a collective sense of mission	36	12.5	7	7.2	64	22.2	23	23.7	188	65.0	67	69.0
specifies the importance of having a strong sense of purpose	42	14.6	5	5.2	50	17.3	26	26.8	194	67.2	64	66.0
talks about their most important values and beliefs	68	23.5	20	20.6	78	27.0	21	21.7	139	48.1	56	57.8

Table 3. Frequency of Manager and Employee Responses to Questions on Manager Transformational Leadership^a and Outcomes of Leadership Characteristics^a by Comparison and Feedback Group Continued

	Not at all ^b				Sometimes ^b				Frequently ^b			
	Comparison		Feedback		Comparison		Feedback		Comparison		Feedback	
	n	% ^c	n	% ^c	n	% ^c	n	% ^c	n	% ^c	n	% ^c
Inspirational Motivation (IM)												
Manager Responses												
I express confidence that goals will be achieved	0	0.0	0	0.0	1	1.8	4	19.1	55	98.2	17	81.0
I talk enthusiastically about what needs to be accomplished	1	1.8	0	0.0	6	10.8	2	9.5	49	87.5	19	90.5
I talk optimistically about the future	1	1.8	0	0.0	4	7.1	1	4.8	50	89.3	20	95.2
I articulate a compelling vision of the future	6	10.7	0	0.0	12	21.4	7	33.3	38	67.8	14	66.7
Employee Responses												
My director/manager...												
expresses confidence that goals will be achieved	13	4.5	5	5.1	47	16.3	17	17.5	227	78.6	75	77.3
talks enthusiastically about what needs to be accomplished	22	7.6	6	6.2	56	19.4	18	18.6	211	73.0	73	75.3
talks optimistically about the future	25	8.6	9	9.3	44	15.2	15	15.5	220	76.2	73	75.3
articulates a compelling vision of the future	34	11.7	9	9.3	61	21.1	29	29.9	192	66.5	58	59.8
Intellectual Stimulation (IS)												
Manager Responses												
I seek differing perspectives when solving problems	1	1.8	0	0.0	9	16.1	0	0.0	46	82.1	21	100.0
I suggest new ways of looking at how to complete assignments	0	0.0	0	0.0	12	21.4	4	19.1	44	78.6	17	80.9
I get others to look at problems from many different angles	1	1.8	0	0.0	12	21.4	3	14.3	43	76.8	18	85.7
I re-examine critical assumptions to question whether they are appropriate	2	3.6	0	0.0	11	19.6	2	9.5	43	76.8	19	90.4
Employee Responses												
My director/manager...												
seeks differing perspectives when solving problems	35	12.2	12	12.4	76	26.3	19	19.6	174	60.2	66	68.1
suggests new ways of looking at how to complete assignments	38	13.1	13	13.4	74	25.6	24	24.7	175	60.6	60	61.8
gets me to look at problems from many different angles	53	18.3	13	13.4	73	25.3	36	37.1	161	55.8	47	48.5
re-examines critical assumptions to question whether they are appropriate	52	18.0	10	10.3	61	21.1	32	33.0	168	58.2	55	56.7

Table 3. Frequency of Manager and Employee Responses to Questions on Manager Transformational Leadership^a and Outcomes of Leadership Characteristics^a by Comparison and Feedback Group Continued

	Not at all ^b				Sometimes ^b				Frequently ^b			
	Comparison		Feedback		Comparison		Feedback		Comparison		Feedback	
	n	% ^c	n	% ^c	n	% ^c	n	% ^c	n	% ^c	n	% ^c
Individual Consideration (IC)												
Manager Responses												
I help others develop their strengths	0	0.0	0	0.0	9	16.1	3	14.3	47	83.9	18	85.7
I consider an individual as having different needs, abilities, and aspirations from others	1	1.8	0	0.0	4	7.1	0	0.0	51	91.1	21	100.0
I treat others as individuals rather than just a member of the group	1	1.8	0	0.0	7	12.5	0	0.0	48	85.8	21	100.0
I spend time teaching and coaching	1	1.8	0	0.0	11	19.6	4	19.1	44	78.6	17	81.0
Employee Responses												
My director/manager...												
helps me to develop my strengths	43	14.9	15	15.5	58	20.1	19	19.6	188	65.0	63	65.0
considers me as having different needs, abilities, and aspirations from others	71	24.6	22	22.7	67	23.2	30	30.9	145	50.1	45	46.4
treats me as an individual rather than just a member of the group	22	7.6	9	9.3	35	12.1	13	13.4	232	80.3	75	77.4
spends time teaching and coaching	53	18.3	18	18.6	75	26.0	22	22.7	161	55.8	55	56.7
Extra Effort												
Manager Responses												
I get others to do more than they expected to do	3	5.4	0	0.0	15	26.8	7	33.3	38	67.9	14	66.7
I heighten others' desire to succeed	1	1.8	0	0.0	10	17.9	5	23.8	45	80.3	16	76.2
I increase others' willingness to try harder	0	0.0	0	0.0	9	16.1	10	47.6	47	84.0	11	52.4
Employee Responses												
My director/manager...												
gets others to do more than they expected to do	48	16.6	18	18.6	80	27.7	32	33.0	157	54.3	46	47.4
heightens others' desire to succeed	33	11.4	18	18.6	44	15.2	17	17.5	210	72.7	62	63.9
increases others' willingness to try harder	38	13.1	15	15.6	54	18.7	19	19.6	195	67.5	63	65.0

Table 3. Frequency of Manager and Employee Responses to Questions on Manager Transformational Leadership^a and Outcomes of Leadership Characteristics^a by Comparison and Feedback Group Continued

	Not at all ^b				Sometimes ^b				Frequently ^b			
	Comparison		Feedback		Comparison		Feedback		Comparison		Feedback	
	n	% ^c	n	% ^c	n	% ^c	n	% ^c	n	% ^c	n	% ^c
Effectiveness												
Manager Responses												
I am effective in meeting others' job-related needs	0	0.0	0	0.0	10	17.9	4	19.1	46	82.2	17	81.0
I am effective in representing others to higher authority	1	1.8	0	0.0	9	16.1	2	9.5	46	82.1	19	90.4
I am effective in meeting organizational requirements	0	0.0	0	0.0	1	1.8	0	0.0	55	98.2	21	100.0
I lead a group that is effective	0	0.0	0	0.0	1	1.8	3	14.3	55	98.2	18	85.7
Employee Responses												
My director/manager...												
is effective in meeting my job-related needs	21	7.3	7	7.3	60	20.8	27	27.8	208	72.0	63	65.0
is effective in representing me to higher authority	39	13.3	14	14.4	57	19.7	19	19.6	187	64.7	64	65.9
is effective in meeting organizational requirements	20	6.9	4	4.1	27	9.3	21	21.7	239	82.7	72	74.3
leads a group that is effective	28	9.6	12	12.4	37	12.8	17	17.5	222	76.9	68	70.1
Satisfaction												
Manager Responses												
I use methods of leadership that are satisfying	0	0.0	0	0.0	7	12.5	5	23.8	49	87.5	16	76.2
I work with others in a satisfactory way	0	0.0	0	0.0	1	1.8	0	0.0	55	98.2	21	100.0
Employee Responses												
My director/manager...												
uses methods of leadership that are satisfying	33	11.4	14	14.5	46	15.9	21	21.7	209	72.3	61	62.9
works with me in a satisfactory way	26	9.0	8	8.3	34	11.8	19	19.6	228	78.9	70	72.1

^a The questions in this table come from the MLQ Form 5X-Short and are grouped into the separate Transformational Leadership Scales (i.e. IIA, IIB, IM, IS, IC) and Outcomes of Leadership Scales (i.e. Extra Effort, Effectiveness, Satisfaction).

^b Response categories have been collapsed into three categories, Frequently (includes responses=3-4), Sometimes (includes response=2), and Not at all (includes responses=0-1).

^c Totals may not reflect 100% because Non-Responses have been omitted.

Formal Upward Evaluation Perception Gap Differences

Differences between manager and subordinates scores were calculated to determine the differences in manager and subordinate perceptions of the manager's behavior, or the perception gap. Differences in sub and total scores were also compared to previous studies.

As shown in Table 4, analysis of the differences between manager and subordinate scores did not reveal significant differences for the TFS, OLS and sub-scores between the Feedback and Comparison groups. The Feedback and Comparison groups were also compared to Sarver's (10) and Tapahe's (11) results. Significant differences were found for some sub scores between the Feedback group, Communication group, and Sarver's study (10) when examining differences in subordinate's and manager's scores.

Table 4. Mean Differences in Scales and Total Scores Between Manager and Subordinates in Hospital Settings and Students and Instructors in Dietetics Education Compared

	Current Study: Feedback Group	Current Study: Comparison Group	Sarver ⁽¹⁰⁾ Study	Tapahe ⁽¹¹⁾ Study
Transformational Leadership Scales	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE
Idealized Influence— Attributed	-0.2 ± 0.7 ^{xy}	1.3 ± 0.4 ^x	0.8 ± 0.3 ^x	-0.5 ± 0.4 ^y
Idealized Influence— Behavior	0.5 ± 0.7	1.6 ± 0.4	2.0 ± 0.3	1.2 ± 0.4
Inspirational Motivation	1.0 ± 0.6 ^{xy}	1.3 ± 0.4 ^x	1.3 ± 0.3 ^x	-0.1 ± 0.4 ^y
Intellectual Stimulation	2.5 ± 0.6 ^{xz}	1.8 ± 0.4 ^{xyz}	2.2 ± 0.3 ^{xy}	0.5 ± 0.4 ^{yz}
Individual Consideration	2.4 ± 0.6	2.5 ± 0.4	3.0 ± 0.3	2.1 ± 0.4
TFS ^a Total Differences	6.1 ± 2.8 ^{xy}	8.5 ± 1.7 ^{xy}	9.6 ± 1.2 ^x	3.1 ± 1.6 ^y

^aTFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).
^{x,y,z} Means not sharing a common superscript on rows are significantly different, Tukey-Kramer P<0.05.

Practical Differences Rather than Significant Differences. Though not significant, the scores found in the Feedback group were more similar to Tapahe's (11) results, and the

Comparison group scores were more similar to Sarver's (10) results. Because the samples were similar, it was expected that the Comparison group would be similar to Sarver's (10) results.

And though Tapahe's (11) sample received upward feedback more often, it was expected that the Feedback group results would be similar to Tapahe's results.

Formal Upward Evaluation Subordinate Scores

As shown in Table 5, there were no differences found between the subordinate TFS, OLS and sub-scores. It appears that the subordinates' ratings of their managers' behavior are not affected by the use of upward feedback based on assigned group.

Table 5. Subordinate TFS^a and OLS^b scores by Comparison and Feedback Group

	Comparison	Feedback
	LS Mean ± SE	LS Mean ± SE
Transformational Leadership Scales		
Idealized Influence—Attributed (IIA)	11.3 ± 0.3	11.8 ± 0.3
Idealized Influence—Behavior (IIB)	10.8 ± 0.3	11.6 ± 0.5
Inspirational Motivation (IM)	11.7 ± 0.3	11.9 ± 0.5
Intellectual Stimulation (IS)	10.3 ± 0.3	10.8 ± 0.5
Individual Consideration (IC)	10.7 ± 0.3	11.1 ± 0.6
TFS Total Differences	54.7 ± 1.5	57.2 ± 2.5
Outcomes of Leadership Scales		
Extra Effort	8.2 ± 0.3	8.2 ± 0.5
Effectiveness	11.9 ± 0.4	12.1 ± 0.6
Satisfaction	6.0 ± 0.2	6.1 ± 0.3
OL Score Differences	26.0 ± 0.8	26.3 ± 1.3

^aTFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).
^b OLS is the sum of sub-scores from individual outcomes of leadership characteristic scales (i.e. Extra Effort, Effectiveness, Satisfaction).

Manager Implementation of Subordinate Feedback

Actively implementing feedback was measured by the managers' report of valuing subordinate feedback and improving managerial behavior based on feedback. There were no significant differences found between subordinate scores based on the managers' report of trying to improve their behavior based on subordinate feedback, as shown in Table 6.

There were significant differences found between subordinate scores based on the manager's report of valuing subordinate feedback for the IM TFS sub-score and the OLS, as shown in Table 7. However, these differences are based on an *n* of one.

The majority of managers, regardless of group, reported strongly agreeing that they value feedback from their employees and that they try to improve their performance based on feedback both from their subordinates and from their managers (Tables 6, 7).

Manager Tenure Results

When examining the managers' total time in a management position, no significant differences were found for sub- or total scores in the TFS, as shown in Table 8. However, for the managers' time in their current position, those who had been in their current position for 6-10 years had significantly higher IM, IC, and TFS scores than those who had been in their position for 12 or more years (see Table 9).

Subordinate Enjoyment Results

Sub-scores and total scores for both the Transformational Leadership and Outcomes of Leadership for those subordinates who strongly agreed that they enjoyed their jobs were significantly higher than for those who did not (see Table 10). Also of significance is the finding that the majority of subordinates agree or strongly agree that they *enjoy their job*.

Table 6. Differences Between Manager and Subordinate TFS^a and OLS^b Scales and Total Scores Based on Level of Improving Performance Based on Employee Feedback

Managers	<i>In general, I try to improve my managerial performance based on feedback from my employees...</i>			
	Strongly Agree (n=47, 61.0%)	Agree (n=24, 31.2%)	Somewhat Agree (n=3, 3.9%)	Strongly Disagree (n=2, 2.6%)
Transformational Leadership Scales	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE
Idealized Influence—Attributed	1.0 ± 0.4	0.2 ± 0.6	4.6 ± 1.7	-1.3 ± 2.1
Idealized Influence—Behavior	1.7 ± 0.5	0.6 ± 0.6	2.3 ± 1.8	-0.7 ± 2.2
Inspirational Motivation	1.5 ± 0.4	0.5 ± 0.6	3.3 ± 1.7	0.3 ± 2.0
Intellectual Stimulation	2.1 ± 0.4	1.6 ± 0.6	1.9 ± 1.7	1.7 ± 2.1
Individual Consideration	2.9 ± 0.4	1.9 ± 0.6	4.4 ± 1.6	0.8 ± 2.0
TFS Total Differences	9.1 ± 1.9	4.8 ± 2.6	16.5 ± 7.4	0.7 ± 9.1
Outcomes of Leadership Scales				
Extra Effort	0.8 ± 0.4	-0.5 ± 0.5	3.4 ± 1.5	-0.7 ± 1.8
Effectiveness	1.8 ± 0.4	0.8 ± 0.6	3.9 ± 1.7	-1.6 ± 2.0
Satisfaction	0.8 ± 0.2	0.1 ± 0.3	2.3 ± 0.9	-0.3 ± 1.1
OL Score Differences	3.4 ± 0.9	0.9 ± 1.3	9.5 ± 3.7	-2.6 ± 4.6

Statistically significant differences were not found for any scores between groups.

^a TFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).

^b OLS is the sum of sub-scores from individual outcomes of leadership characteristic scales (i.e. Extra Effort, Effectiveness, Satisfaction).

Table 7. Differences Between Manager and Subordinate TFS^a and OLS^b Scales and Total Scores Based on Level of Valuing Employee Feedback

	<i>In general, I value the feedback I receive from my employees...</i>				
	Strongly Agree	Agree	Somewhat Agree	Neither Agree nor Disagree	Strongly Disagree
Managers	(n=50, 64.9%)	(n=19, 24.7%)	(n=3, 3.9)	(n=1, 1.3%)	(n=3, 3.9%)
Transformational Leadership Scales	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE
Idealized Influence—Attributed	1.0 ± 0.4	0.4 ± 0.7	-0.4 ± 1.7	8.2 ± 3.0	-0.2 ± 1.7
Idealized Influence—Behavior	1.4 ± 0.4	1.5 ± 0.7	-1.6 ± 1.8	7.8 ± 3.1	0.2 ± 1.8
Inspirational Motivation	1.2 ± 0.4 ^{xyz}	1.3 ± 0.6 ^{xyz}	-2.5 ± 1.6 ^{xy}	8.4 ± 2.7 ^{xz}	1.2 ± 1.6 ^{xyz}
Intellectual Stimulation	2.1 ± 0.4	2.0 ± 0.6	-1.2 ± 1.6	7.2 ± 2.8	0.8 ± 1.6
Individual Consideration	2.8 ± 0.4	2.0 ± 0.6	2.4 ± 1.6	6.6 ± 2.8	0.2 ± 1.6
TFS Total Differences	8.5 ± 1.8	7.2 ± 2.9	-3.3 ± 7.2	38.2 ± 12.5	2.1 ± 7.2
Outcomes of Leadership Scales					
Extra Effort	0.5 ± 0.4	1.1 ± 0.6	-0.5 ± 1.5	6.3 ± 2.6	-1.1 ± 1.5
Effectiveness	1.5 ± 0.4	1.8 ± 0.6	-0.7 ± 1.6	7.8 ± 2.8	-1.4 ± 1.6
Satisfaction	0.6 ± 0.2	0.6 ± 0.4	0.6 ± 0.9	4.4 ± 1.6	-0.5 ± 0.9
OL Score Differences	2.6 ± 0.9 ^{xyz}	3.4 ± 1.5 ^{xyz}	-0.6 ± 3.7 ^{xyz}	18.5 ± 6.4 ^{xy}	-3.1 ± 3.7 ^{xz}

^{x,y,z} Means not sharing a common superscript on rows are significantly different, Tukey-Kramer test P<0.05.

^a TFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).

^b OLS is the sum of sub-scores from individual outcomes of leadership characteristic scales (i.e. Extra Effort, Effectiveness, Satisfaction).

Table 8. Subordinate Scores by Manager's Total Time in a Management Position

	≤ 5 Years (n=23, 29.9%)	6-10 Years (n=10 13.0%)	≥11 Years (n=43, 55.9%)
Transformational Leadership Scales	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE
Idealized Influence—Attributed	11.6 ± 0.5	12.1 ± 0.8	11.1 ± 0.4
Idealized Influence—Behavior	11.4 ± 0.5	11.5 ± 0.7	10.7 ± 0.3
Inspirational Motivation	12.3 ± 0.5	12.5 ± 0.7	11.2 ± 0.3
Intellectual Stimulation	10.8 ± 0.5	11.5 ± 0.8	10.1 ± 0.4
Individual Consideration	11.1 ± 0.5	11.8 ± 0.8	10.4 ± 0.4
TFS ^a Total	57.1 ± 2.3	59.5 ± 3.6	53.4 ± 1.7
Outcomes of Leadership Scales			
Extra Effort	8.5 ± 0.4	8.5 ± 0.7	7.9 ± 0.3
Effectiveness	12.6 ± 0.6	12.4 ± 0.9	11.4 ± 0.4
Satisfaction	6.3 ± 0.3	6.0 ± 0.5	5.8 ± 0.2
OLS ^b Total	27.4 ± 1.3	26.9 ± 1.9	25.1 ± 0.9

Statistically significant differences were not found for any scores between groups.
^a TFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).
^b OLS is the sum of sub-scores from individual outcomes of leadership characteristic scales (i.e. Extra Effort, Effectiveness, Satisfaction).

Table 9. Subordinate Scores by Manager's Time in Current Position

	≤ 5 Years (n=41, 53.3%)	6-11 Years (n=12, 15.6%)	≥12 Years (n=23, 29.9%)
Transformational Leadership Scales	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE
Idealized Influence—Attributed	11.3 ± 0.4	12.7 ± 0.7	10.9 ± 0.5
Idealized Influence—Behavior	10.9 ± 0.3	12.0 ± 0.6	10.6 ± 0.5
Inspirational Motivation	11.9 ± 0.4 ^{xyz}	12.9 ± 0.6 ^{xy}	10.8 ± 0.5 ^{xz}
Intellectual Stimulation	10.4 ± 0.4	11.7 ± 0.7	9.9 ± 0.5
Individual Consideration	10.7 ± 0.4 ^{xyz}	12.3 ± 0.7 ^{xy}	10.1 ± 0.5 ^{xz}
TFS ^a Total	55.2 ± 1.7	61.6 ± 3.2	52.4 ± 2.3
Outcomes of Leadership Scales			
Extra Effort	8.2 ± 0.3	9.1 ± 0.6	7.6 ± 0.4
Effectiveness	11.9 ± 0.4	13.0 ± 0.8	11.4 ± 0.6
Satisfaction	5.9 ± 0.2	6.7 ± 0.4	5.8 ± 0.3
OLS ^b Total	26.0 ± 0.9	28.7 ± 1.7	24.8 ± 1.3

^a TFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).
^b OLS is the sum of sub-scores from individual outcomes of leadership characteristic scales (i.e. Extra Effort, Effectiveness, Satisfaction).
^{x,y,z} Means not sharing a common superscript on rows are significantly different, Tukey-Kramer test P<0.05.

Table 10. Mean Subordinate-Rated TFS^a and OLS^b Scales and Total Scores Based on Level of Subordinate Job Enjoyment

	<i>In general, I enjoy my job...</i>					
	Strongly Agree (n=150, 38.9%)	Agree (n=185, 47.9%)	Somewhat Agree (n=40, 10.4%)	Neither Agree or Disagree (n=4, 1.0%)	Disagree (n=4, 1.0%)	Strongly Disagree (n=1, 0.3%)
Transformational Leadership Scales	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE	LS Mean ± SE
Idealized Influence—Attributed	12.6 ± 0.3 ^v	11.2 ± 0.2 ^{wxy}	10.4 ± 0.5 ^{wx}	6.3 ± 1.7 ^{xy}	6.5 ± 1.7 ^{wxy}	0.0 ± 3.3 ^{xy}
Idealized Influence—Behavior	12.3 ± 0.3 ^v	10.7 ± 0.2 ^{wx}	10.2 ± 0.5 ^{wx}	6.2 ± 1.6 ^{wx}	9.5 ± 1.6 ^{vw}	1.0 ± 3.1 ^x
Inspirational Motivation	13.0 ± 0.3 ^v	11.6 ± 0.2 ^{wx}	10.6 ± 0.5 ^{wx}	6.5 ± 1.6 ^x	9.5 ± 1.6 ^{vw}	1.0 ± 3.3 ^x
Intellectual Stimulation	11.5 ± 0.3 ^v	10.1 ± 0.3 ^{wx}	10.1 ± 0.5 ^{wx}	5.7 ± 1.7 ^{wx}	6.8 ± 1.7 ^{vw}	0.0 ± 3.4 ^x
Individual Consideration	12.0 ± 0.3 ^{vx}	10.2 ± 0.3 ^{wxyz}	10.3 ± 0.5 ^{wxy}	7.3 ± 1.7 ^{vwxyz}	5.1 ± 1.7 ^{*xyz}	-0.0 ± 3.5 ^{yz}
TFS^a Total	61.5 ± 1.2^v	53.9 ± 1.1^{wxy}	51.7 ± 2.3^{wx}	31.9 ± 7.4^{xy}	37.4 ± 7.4^{wxy}	2.0 ± 17.7^{xy}
Outcomes of Leadership Scales						
Extra Effort	9.3 ± 0.2 ^v	7.8 ± 0.2 ^{wxy}	7.4 ± 0.5 ^{wxy}	6.1 ± 1.5 ^{vwxy}	3.0 ± 1.5 ^x	1.0 ± 2.9 ^{vwxy}
Effectiveness	13.5 ± 0.3 ^v	11.4 ± 0.3 ^{wx}	10.9 ± 0.6 ^{wx}	9.0 ± 1.8 ^{vw}	5.5 ± 1.8 ^x	1.0 ± 3.5 ^x
Satisfaction	6.7 ± 0.2 ^v	5.8 ± 0.1 ^{wx}	5.4 ± 0.3 ^{wx}	4.5 ± 1.0 ^{vw}	2.5 ± 1.0 ^x	-0.0 ± 2.0 ^{wx}
OLS^b Total	29.5 ± 0.6^v	25.0 ± 0.6^{wxy}	23.7 ± 1.2^{wx}	19.6 ± 3.9^{vwxy}	11.0 ± 3.9^{xy}	2.0 ± 7.8^{wxy}

^a TFS is the sum of sub-scores from individual transformational leadership characteristic scales (i.e. IIA, IIB, IM, IS, IC).

^b OLS is the sum of sub-scores from individual outcomes of leadership characteristic scales (i.e. Extra Effort, Effectiveness, Satisfaction).

^{v,w,x,y,z} means not sharing a common superscript on rows are significantly different, Tukey-Kramer test P<0.05.

APPENDIX D: COMPLETE DISCUSSION

DISCUSSION

Overall, the sample did not respond in the manner expected based on the review of the literature concerning the effects of formal, upward evaluation. While there may be a variety of factors that influenced the present study, this discussion will focus on one intriguing finding dealing with a discrepancy between Phase I and Phase II responses.

This discrepancy can be found when examining the differences between Phase I and Phase II responses dealing with formal, upward evaluation. Based on Phase I responses, 100% of Feedback subordinates should have reported giving their managers formal, upward feedback at least once per year. However, only 28.8% of Feedback subordinates reported doing so. Likewise, 100% of Feedback managers should have reported receiving formal feedback from their subordinates, but only 26.8% of Feedback managers reported receiving such feedback.

Though it is possible that managers and subordinates misunderstood the question that assessed their use of formal, upward feedback in Phase II, it is unlikely due to the formatting and specificity given in the question.

One explanation of this discrepancy involving formal, upward feedback may be that Phase I was targeted at DFNS, who have a clear understanding of departmental evaluation *policies*. Phase II was targeted at managers and subordinates, where actual evaluation *practices* occur, rather than creation of the evaluation policies. With only 28.8% of subordinates and 26.8% of managers in the Feedback group reporting that they give (or receive) formal, upward feedback once or more per year, clearly there is a lack of communication and/or training between directors, managers, and subordinates concerning evaluation policies.

Further evidence of lack of communication and/or training was found in the unsuccessful attempt to reorganize groups based on Phase II responses. Within any one

manager's group of subordinates, the subordinates were not consistent in their responses about the frequency of giving formal evaluation to their manager; some reporting never giving formal, upward feedback and some reporting multiple times per year. The inconsistent upward feedback practices within the Feedback and Comparison groups invalidated the group assignments, thereby bringing the results into question.

Addressing the Hypotheses

1. *Formal upward evaluation will narrow the perception gap of manager and subordinate views of managerial behavior as measured by the MLQ.*

The data gathered in this study do not support this hypothesis. The differences between manager and subordinate MLQ scores in the Feedback group were not significantly smaller than the difference between managers and subordinates in the Comparison group. However, the surprisingly large percentage of subordinates (70.1%) in the Feedback group who *Never* providing formal, upward feedback may have significantly altered the results.

2. *Facilities using formal upward evaluation will have higher subordinate-rated MLQ scores than facilities not using formal upward evaluation.*

The findings of this study do not support this hypothesis. The subordinate TFS and OLS sub-scales and total scores were not significantly different between the Feedback and Comparison groups. The subordinate scores for the TFS and OLS were slightly higher in the Feedback group (Feedback group 57.2 ± 2.5 , Comparison group 54.7 ± 1.5), but not statistically different.

- 3. Managers who actively implement subordinate feedback will have higher subordinate-rated MLQ scores than those who do not actively implement subordinate feedback.*

The data gathered in this study do not support this hypothesis. Subordinate scores did not significantly differ between the Feedback and Comparison groups. Because most managers (92.2%) agreed or strongly agreed that they try to improve their performance based on subordinate feedback, it is hard to see a trend with the remaining portion of the managers. Scores in the remaining groups were heavily skewed because of the small number of respondents in those groups.

One encouraging result was that most managers have positive attitudes about valuing and implementing subordinate feedback. Percentages were similar between the Feedback and Comparison groups for these attitudinal questions, with the majority in both groups strongly agreeing that they value and try to implement subordinate feedback.

- 4. Managers with longer tenures will have higher subordinate-rated MLQ scores.*

The findings of this study do not support this hypothesis. In fact, those with the highest subordinate TFS scores (61.6 ± 3.2) were managers who had been in their current positions six to 11 years, and the managers who had been in their current positions for 12 or more years had the lowest subordinate TFS scores (52.4 ± 2.3). When looking at time in all management positions, no significant differences were found between groups. Also worth noting is that the groups with higher subordinate scores also had fewer managers, and thus fewer subordinates.

While the differing number of managers and subordinates between groups may have affected the results slightly, the tenure of the managers appears to have influenced their scores. It is hypothesized that managers with shorter tenures are still acclimatizing to their positions,

while managers with the longest tenures have well-developed habits and practices, meaning they may not be as open to subordinate feedback. Managers in the middle range of tenure may feel more comfortable in their roles, but are still open improvement and changes in their practices.

Another explanation for the differences in scores may be found in generational differences (7). It is assumed that managers with longer tenures are from an earlier generation than those with shorter tenures. It may be possible that those in different generations have different views on managerial practices.

Overall, it is unclear whether tenure in management positions is a factor in the transformational characteristics of managers. Several influences such as amount of experience or generational characteristics may play a role in transformational characteristics of managers.

5. Increased subordinate-job enjoyment scores will be positively related to increased subordinate-rated MLQ scores.

The findings of this study support this hypothesis. Those subordinates who strongly agreed that they enjoyed their jobs had significantly higher TFS and OLS sub-scores and total scores than did the other subordinates, meaning they rated their managers' behavior significantly higher on these scales.

It is also encouraging that the majority of subordinates (86.8%) strongly agree or agree that they enjoy their jobs. It is unclear if subordinates enjoy their jobs because their managers have more transformational characteristics or if they rate their managers' behavior higher because they enjoy their jobs.

Other Discussion

Differences Between Studies

The differences for TFS total and sub-scores between this study and the previous studies by Sarver (10) and Tapahe (11) are not statistically significant. However, it is interesting to note that scores for the Feedback group were more similar to the dietetics instructors and students (11) and the Comparison group scores were more similar to the managers and subordinates (10). If the Feedback group in the current study had been more clearly defined in the formal, upward feedback practices, one wonders if the scores might be more similar to Tapahe's group.

It is important to point out that though it would be expected that those using formal, upward feedback would have similar scores to Tapahe's group, it is still expected that managers in hospital settings using formal, upward feedback from subordinates would have a less accurate self-perception of their managerial behavior because of the setting. While dietetics instructors receive consistent and frequent formal, upward evaluation, managers in hospital settings would not receive as much subordinate feedback as frequently. However, it is still expected that managers receiving formal, upward feedback would have more accurate self-perceptions of their managerial behavior than those who do not.

Another difference between dietetics instructors and managers is the role they play in teaching. While an instructor's main purpose is to teach and mentor students, managers have many other duties besides the role of teaching and mentoring, leaving less time for managers to fill the role of teacher and mentor for their subordinates (6).

Practical Differences

Though the differences between the Feedback and Comparison groups were not statistically significantly different, the differences may be practical. There is a 6.4 point decrease

in the TFS total score when comparing Sarver's (10) and Tapahe's (11) groups. When looking at the perception gap between the Feedback and Comparison groups, a 2.4-point decrease in difference scores in the Feedback group shows that there may be some value of formal, upward feedback. However, because it appears that the feedback practices in the groups may be unclear, this perception gap difference may be even more exaggerated if the formal, upward feedback practices were more clearly defined between groups.

Possible Communication and Training Implications

As stated earlier concerning the differences in reports of formal, upward feedback practices, the discrepancies between what the department heads (DFNS) and the subordinates view as evaluation practices show a possible lack of training or communication within facilities. This brings to light possibilities for future research into policies and how they are implemented in facilities.

Future Research

Future research needs to be done on the practices versus the policies of food and nutrition departments in hospitals. Based on the findings of this study, implementation of feedback policies may widely vary in hospital settings. Examining the causes of not following feedback policies may be beneficial to improve policy implementation and possibly productivity. To further explore the implementation of feedback policies, research should include the collection of formal, upward evaluation forms. Reporting specific training practices for both managers and subordinates may provide additional insight. The findings of this study suggest that communication and training are key in upward, formal feedback.

Though research of implementation of feedback policies is critical in understanding this aspect of management, the accountability of managers for responding to the feedback given is

also crucial. It is expected that the greater accountability managers have for feedback from the subordinate evaluations, the greater modification in behavior would take place. Therefore, along with implementation, the consequences for following or disregarding feedback should also be investigated.

Along with research into implementation of feedback policies, further research could be carried out concerning the effects of formal, upward feedback including self-perceptions, promotion rates of managers, and group effectiveness. As this area of management is not well studied, many aspects require further research.

Another area of future research could be subordinate job enjoyment as it relates to transformational leadership in hospital settings. Other factors, including individual transformational characteristics of managers, position tenure, and training practices, could be examined.

APPENDIX E: IRB APPROVAL

Institutional Review Board
for Human Subjects



Brigham Young University
A-285 ASB . Provo, Utah 84602
(801) 422-3841 / Fax: (801) 422-0620

March 25, 2009

Jessica Beesley
930 W 965 N #316
Orem, UT 84057

Re: Effect of Upward Feedback on the Gap Between Manager and Subordinate Perception of Manager Behavior

Dear Jessica Beesley

This is to inform you that Brigham Young University's IRB has approved the above research study.

The approval period is from 3-25-2009 to 3-24-2010. Your study number is X090090. Please be sure to reference this number in any correspondence with the IRB.

Continued approval is conditional upon your compliance with the following requirements.

A copy of the 'Informed Consent Document' approved as of 3-16-2009 is enclosed. No other consent form should be used.

All protocol amendments and changes to approved research must be submitted to the IRB and not be implemented until approved by the IRB.

The enclosed recruitment advertisement has been approved. Advertisements, letters, Internet postings and any other media for subject recruitment must be submitted to IRB and approved prior to use.

A few months before this date we will send out a continuing review form. There will only be two reminders. Please fill this form out in a timely manner to ensure that there is not a lapse in your approval. If you have any questions, please do not hesitate to call me.

Sincerely,

Christopher Dromey, Ph.D., Chair
Santee M.P. Munoz, Administrator
Institutional Review Board for Human Subjects
CD/se

APPENDIX F: PILOT STUDY MATERIALS

- Cover Letter
- Evaluation tool for Pilot Study Materials for Managers
- Evaluation tool for Pilot Study Materials for Subordinates

Dear Manager:

You have been selected to participate in the pilot study for our research project on managerial behavior and the effects of feedback on it.

We would appreciate your assistance with the following:

- Read the initial cover letter (**tan**) and postcard (**light blue**).
- Instead of completing the postcard, simply evaluate it on the provided questionnaire (**pink**).
- Read the “Email to Postcard Respondents” (**yellow**).
- Read the cover letter included with the packet labeled “Manager Survey Cover Letter” (**blue, p. 1**).
- Respond to the “Manager Survey Questions” (**blue, p. 2-4**).
- Take a few additional minutes to answer the questions on the **pink** pilot questionnaire about the letter, postcard, email, survey cover letter, and survey.

- Distribute the employee surveys (**ivory**) to three or four employees that directly report to you. Please explain to them the purpose of a pilot study and emphasize that this will help us to finalize our survey.
- Ask your employees to fill out the **ivory** survey and **green** pilot questionnaire after reading the letter and survey. Please have them send both the **ivory** survey and **green** pilot questionnaire back in the business-reply envelope provided.

Once completed, you and your employees can return both the surveys and pilot questionnaires individually in the enclosed postage-paid business reply envelopes by May 15, 2009.
Thank you for your assistance.

Sincerely,

Jessica Zetterquist, RD, LD
Graduate Student

Nora Nyland, PhD, RD, CD

DEPARTMENT OF NUTRITION, DIETETICS, AND FOOD SCIENCE
BRIGHAM YOUNG UNIVERSITY • S221 EYRING SCIENCE CENTER • PROVO, UTAH 84602
(801)422-3912 • FAX (801) 422-0258 • UPWARDFEEDBACK@BYU.EDU

Answer the questions about each of the following:

	Initial Cover Letter		Postcard		Email		Survey Cover Letter		Survey	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1. Was it clear? Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Was it concise? Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was it easily understood? Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Did you have any questions after reading the... Comments:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Answer the following questions about the survey:

- Is the wording of any question confusing? Yes No
If yes, which question(s)? _____
- Is the survey itself readable? Yes No
Comments _____
- Are any questions offensive? Yes No
If yes, which question(s)? _____
- Is the flow of questions logical? Yes No
Comments _____
- Are there any additional questions or issues that you feel should be addressed in the survey?
 Yes No
Comments _____
- Approximately how long did it take for you to complete the survey? _____
- Please give any other suggestions or comments: _____

Answer the questions about each of the following:

	Survey Cover Letter		Survey	
	Yes	No	Yes	No
1. Was it clear?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				
2. Was it concise?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				
3. Was it easily understood?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				
4. Did you have any questions after reading the...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				

Answer the following questions about the survey:

1. Is the wording of any question confusing? Yes No
If yes, which question(s)? _____

2. Is the survey itself readable? Yes No
Comments _____

3. Are any questions offensive? Yes No
If yes, which question(s)? _____

4. Is the flow of questions logical? Yes No
Comments _____

5. Are there any additional questions or issues that you feel should be addressed in the survey?
 Yes No
Comments _____

6. Approximately how long did it take for you to complete the survey? _____
7. Please give any other suggestions or comments: _____

APPENDIX G: PHASE I MATERIALS

- Initial Letter of Transmittal
- Performance Evaluation Questionnaire
- Follow-up

Dear Director of Food and Nutrition Services:

Most people recognize the value of feedback to improve performance. However, little research on the role of upward communication within hospital food and nutrition services has been done. We are investigating the influence of formal subordinate evaluation of supervisors or managers on manager behavior.

You have been selected for participation in this study because of your position at a hospital selected from the American Hospital Association database. Your participation is critical in helping us explore this facet of managerial performance.

Phase I of this research study is to identify the extent to which formal upward evaluation takes place in the hospital food and nutrition care setting. Please take a few minutes (less than 5) to complete the enclosed questionnaire. **Even if you do not use formal subordinate evaluation, please answer questions 1 and 2. Please return the questionnaire in the provided postage-paid envelope by September 15, 2009.**

We ask for your names and contact information because a random sample of Phase I respondents will be asked to participate in the second research phase. This contact information will be considered confidential and will not be shared. Phase II of this research study consists of manager and subordinate questionnaires. These questionnaires will take approximately 10 minutes to complete.

This study has been approved by the Brigham Young University Institutional Review Board. If you have questions about your rights as a participant of this study, please contact Christopher Dromey, Chair of the IRB at (801) 422-6461. There are minimal risks and discomforts associated with participation in this study. Participation is voluntary and is indicated by your completion of the questionnaire. Only aggregated results will be reported.

We appreciate your assistance and look forward to receiving your responses.

Sincerely,

Jessica Zetterquist, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD
Dietetics Program Director

DEPARTMENT OF NUTRITION, DIETETICS, AND FOOD SCIENCE
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(801) 422-3912 • FAX (801) 422-0258 • UPWARDFEEDBACK@BYU.EDU

Performance Evaluation Questionnaire

1. Hospital Name: _____

Food & Nutrition Director Name: _____

Food & Nutrition Director Email: _____

Clinical Nutrition Manager Name: _____

Clinical Nutrition Manager Email: _____

2. Does your Foodservice/Nutrition Department use a formal evaluation of supervisor/manager **by subordinates**?

Yes. Please complete questions 3-5.

No. Thank you for your participation. Please return this page in the postage paid envelope by as soon as possible.

3. **How often** is this formal evaluation of supervisor/manager by subordinates conducted?

More than once per year

Once a year

Other schedule (Please list) _____

4. **How long** has your organization been using formal evaluation of supervisor/manager by subordinates?

1 year or less More than 1 year

5. Where did the formal subordinate evaluation of supervisors/managers originate?

Department Hospital Corporation

Other (Please list) _____

Thank you for your participation.

Please return this page in the postage paid envelope by **ASAP**.

This study has been approved by the BYU Institutional Review Board.

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BRIGHAM YOUNG UNIVERSITY • S221 EYRING SCIENCE CENTER • PROVO, UTAH 84602
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Hello again!

A few weeks ago, you received a short questionnaire about performance evaluation in your facility. We know you *meant* to send that in, but probably didn't get a chance. Here's another chance!

To read more about our study and the IRB approval, please go to <http://tiny.cc/FJ4k4>. You can **either** complete the questionnaire on this website **or** complete the copy included with this card.

Your responses are very important to us. Thank you in advance!

Sincerely,



Jessica Zetterquist, RD, CD
Graduate Student



Nora Nyland, PhD, RD, CD
Dietetics Program Director

APPENDIX H: PHASE II MATERIALS

- Questionnaire Request Email: DFNS
- Questionnaire Request Email: CNM
- Manager Letter of Transmittal: DFNS
- Manager Letter of Transmittal: CNM
- Manager Questionnaire
- English Subordinate Letter of Transmittal
- English Subordinate Questionnaire
- Spanish Subordinate Letter of Transmittal
- Spanish Subordinate Questionnaire
- Phase II Email Follow-Up #1
- Phase II Email Follow-Up #2
- Phase II Survey Follow-Up #1
- Phase II Survey Follow-Up #2
- Phase II Survey Follow-Up #3 Email
- Phase II Survey Follow-Up #3 Packet Insert

Dear _____,

We received your Performance Evaluation Questionnaire and would like to thank you for completing Phase I of our study. Your responses have been extremely interesting and helpful to our research. We greatly appreciate your feedback and participation.

For the second phase of our research, we will send your organization a set of questionnaires. The completion of these questionnaires should take approximately 10 minutes. Each questionnaire will be returned directly to the researchers in a business reply envelope. No one in the organization needs to see another person's responses.

The questionnaire packet will include the following:

- 1 Manager questionnaire
- Multiple subordinate questionnaires
- Business reply envelopes

Please respond to this email with the number of questionnaires needed for all subordinates (excluding the Clinical Nutrition Manager) **who directly report to you** and the languages required. This may include clerical and other support staff, supervisors, managers, etc.

of English questionnaires: _____

of Spanish questionnaires: _____

Please either reply directly to this email message or send your response to UpwardFeedback@byu.edu. Once we receive your response, your questionnaire packet will be mailed to you.

This study has been approved by the Brigham Young University Institutional Review Board. If you have questions about your rights as a participant of this study, please contact Christopher Dromey, Chair of the IRB at (801)422-6461. There are minimal risks and discomforts associated with participation in this study. Participation is voluntary and is indicated by your completion of the questionnaire. Only aggregated results will be reported.

Again, we appreciate your time and assistance in helping us analyze this important facet of managerial performance.

Sincerely,
Jessica Zetterquist, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD
Dietetics Program Director

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Dear _____,

Most people recognize the value of feedback to improve performance. However, little research on the role of upward communication within hospital food and nutrition services has been done.

During the first phase of our research, the Director of Food and Nutrition Services at your facility supplied your contact information. In order to obtain a representation of foodservice/clinical nutrition employees and their supervisors, your participation is very important to us.

For the second phase of our research, we will send your organization a set of questionnaires. The completion of these questionnaires should take approximately 10 minutes. Each questionnaire will be returned directly to the researchers in a business reply envelope. No one in the organization needs to see another person's responses.

The questionnaire packet will include the following:

- 1 Manager questionnaire
- Multiple subordinate questionnaires
- Business reply envelopes

Please respond to this email with the number of questionnaires needed for all subordinates **who directly report to you** and the languages required. This may include dietitians, dietetic technicians, other support staff, etc.

of English questionnaires: _____

of Spanish questionnaires: _____

Please either reply directly to this email message or send your response to UpwardFeedback@byu.edu. Once we receive your response, your questionnaire packet will be mailed to you.

This study has been approved by the Brigham Young University Institutional Review Board. If you have questions about your rights as a participant of this study, please contact Christopher Dromey, Chair of the IRB at (801)422-6461. There are minimal risks and discomforts associated with participation in this study. Participation is voluntary and is indicated by your completion of the questionnaire. Only aggregated results will be reported.

Again, we appreciate your time and assistance in helping us analyze this important facet of managerial performance.

Sincerely,

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Dear Director/Manager,

Thank you for your willingness to contribute to our study of managerial behavior and feedback. Your responses are appreciated.

This study has been approved by the Institutional Review Board (IRB) at Brigham Young University. If you have any questions about your rights as a participant, please contact Christopher Dromey, Chair of the IRB at (801) 422-6461. There are minimal risks associated with participation. Completion of the enclosed questionnaire indicates your continued willingness to participate. (We thank you for your participation in Phase I of this study.) The code number on the questionnaire is for use in data analysis. Only combined results will be reported; individual responses will be kept confidential.

Enclosed you will find:

- This manager questionnaire (green) for you to complete.
 - If there is a Clinical Nutrition Manager, a separate packet will be sent directly to him/her.
- Employee questionnaires (ivory) for those you directly supervise. This may include clerical and other support staff, supervisors, managers, etc.
 - If Spanish questionnaires (yellow) were requested, they are also included.
 - If you supervise a Clinical Nutrition Manager, please do not distribute an employee questionnaire to him/her.
- Postage-paid business reply envelopes for each individual questionnaire.

Next:

- Distribute one "Employee" questionnaire and one business reply envelope to each employee under your direct supervision. The enclosed questionnaire will take approximately 10 minutes to complete, and your encouragement of employee responses is greatly appreciated.
- Complete this "Manager" questionnaire yourself and return it in the business reply envelope.
- Upon completion, you and your employees can return the questionnaires individually in the postage-paid business reply envelopes. **Please return your completed questionnaire within 2 weeks of receiving it.**

Again, we appreciate your time and assistance in helping us analyze this important facet of managerial performance.

Sincerely,



Jessica Zetterquist, RD, CD
Graduate Student



Nora Nyland, PhD, RD, CD
Dietetics Program Director

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Dear Director/Manager,

Thank you for your willingness to contribute to our study of managerial behavior and feedback. Your responses are appreciated.

This study has been approved by the Institutional Review Board (IRB) at Brigham Young University. If you have any questions about your rights as a participant, please contact Christopher Dromey, Chair of the IRB at (801) 422-6461. There are minimal risks associated with participation. Completion of the enclosed questionnaire indicates your continued willingness to participate. The code number on the questionnaire is for use in data analysis. Only combined results will be reported; individual responses will be kept confidential.

Enclosed you will find:

- This manager questionnaire (blue) for you to complete.
- Employee questionnaires (ivory) for those you directly supervise. This may include dietitians, dietetic technicians, and other support staff, etc.
 - If Spanish questionnaires (yellow) were requested, they are also included.
- Postage-paid business reply envelopes for each individual questionnaire.

Next:

- Distribute one "Employee" questionnaire and one business reply envelope to each employee under your direct supervision. The enclosed questionnaire will take approximately 10 minutes to complete, and your encouragement of employee responses is greatly appreciated.
- Complete this "Manager" questionnaire yourself and return it in the business reply envelope.
- Upon completion, you and your employees can return the questionnaires individually in the postage-paid business reply envelopes. **Please return your completed questionnaire within 2 weeks of receiving it.**

Again, we appreciate your time and assistance in helping us analyze this important facet of managerial performance.

Sincerely,



Jessica Zetterquist, RD, CD
Graduate Student



Nora Nyland, PhD, RD, CD
Dietetics Program Director

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-
1. Ethnic Group:
- African American
 - Asian and Pacific Islander
 - Latino/Hispanic
 - Native American
 - White
 - Other (Specify) _____
2. Gender:
- Female Male
3. Age:
- 21-30 41-50 61+
 - 31-40 51-60
4. Level of Education:
(Please indicate highest degree earned.)
- Associate Degree
 - Bachelor's Degree
 - Some post-grad, but no degree
 - Master's Degree
 - Doctoral Degree
- Degree Area: _____
5. I am a:
- ___ Registered Dietitian
 - ___ Dietetic Technician, Registered
 - ___ Other: _____
6. What is your job title?

7. Your pay/salary:
- <\$40,000
 - \$40,000-\$49,999/year
 - \$50,000-\$59,999/year
 - \$60,000-\$69,999/year
 - \$70,000-\$79,999/year
 - \$80,000-\$89,999/year
 - >\$90,000/year
8. My position is considered:
- Full-time Part-time
9. How many employees report directly to you?
- 0 11-20
 - 1-5 21-30
 - 6-10 31+
10. Time period in current management position:
- Less than 1 year
 - 1-2 years
 - 3-5 years
 - 6-8 years
 - 9-11 years
 - 12-14 years
 - ≥15 years
11. Time period in all management positions:
- Less than 1 year
 - 1-5 years
 - 6-10 years
 - 11-20 years
 - ≥21 years
12. In general, I enjoy my role as a manager:
- Strongly agree
 - Agree
 - Somewhat Agree
 - Neither Agree nor Disagree
 - Disagree
 - Strongly Disagree
13. How often do you receive **formal written** feedback from your employees (using an evaluation form)?
- Never
 - Less than once a year
 - 1-2 times per year
 - 3-4 times per year
 - 5+ times per year
14. How often do you receive **informal** feedback from your employees (written or oral)?
- Never
 - Seldom (Less than once per year)
 - Occasionally (1-2 times per year)
 - Quite often (3-4 times per year)
 - Frequently (5+ times per year)
-

15. How often do you **seek feedback** from your employees regarding your performance as a manager:
- Never
 - Seldom (Less than once per year)
 - Occasionally (1-2 times per year)
 - Quite often (3-4 times per year)
 - Frequently (5+ times per year)

16. In general, I **value the feedback** I receive from my employees:
- Not Applicable
 - Strongly Agree
 - Agree
 - Somewhat Agree
 - Neither Agree nor Disagree
 - Disagree
 - Strongly Disagree

17. In general, I try to improve my managerial behavior based on feedback from **my employees**:
- Not Applicable
 - Strongly Agree
 - Agree
 - Somewhat Agree
 - Neither Agree nor Disagree
 - Disagree
 - Strongly Disagree

18. In general, I try to improve my managerial behavior based on feedback from **my manager**:
- Not Applicable
 - Strongly Agree
 - Agree
 - Somewhat Agree
 - Neither Agree nor Disagree
 - Disagree
 - Strongly Disagree

Use the following scale to rate how frequently the followings statements fit you...
(The words "others" may mean your peers, clients, direct reports, supervisors, and/or all of these individuals.)

Circle the appropriate number.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

- | | | | | | |
|--|---|---|---|---|---|
| 19. I provide others with assistance in exchange for their efforts | 0 | 1 | 2 | 3 | 4 |
| 20. I re-examine critical assumptions to question whether they are appropriate | 0 | 1 | 2 | 3 | 4 |
| 21. I fail to interfere until problems become serious | 0 | 1 | 2 | 3 | 4 |
| 22. I focus attention on irregularities, mistakes, exceptions, and deviations from standards.. | 0 | 1 | 2 | 3 | 4 |
| 23. I avoid getting involved when important issues arise | 0 | 1 | 2 | 3 | 4 |
| 24. I talk about my most important values and beliefs..... | 0 | 1 | 2 | 3 | 4 |
| 25. I am absent when needed..... | 0 | 1 | 2 | 3 | 4 |
| 26. I seek differing perspectives when solving problems | 0 | 1 | 2 | 3 | 4 |
| 27. I talk optimistically about the future | 0 | 1 | 2 | 3 | 4 |
| 28. I instill pride in others for being associated with me | 0 | 1 | 2 | 3 | 4 |
| 29. I discuss in specific terms who is responsible for achieving performance targets | 0 | 1 | 2 | 3 | 4 |
| 30. I wait for things to go wrong before taking action | 0 | 1 | 2 | 3 | 4 |
| 31. I talk enthusiastically about what needs to be accomplished | 0 | 1 | 2 | 3 | 4 |

Continued on next page →

	Not at all 0	Once in a while 1	Sometimes 2	Fairly often 3	Frequently, if not always 4
32. I specify the importance of having a strong sense of purpose.....	0	1	2	3	4
33. I spend time teaching and coaching	0	1	2	3	4
34. I make clear what one can expect to receive when performance goals are achieved..	0	1	2	3	4
35. I show that I am a firm believer in "If it ain't broke, don't fix it."	0	1	2	3	4
36. I go beyond self-interest for the good of the group	0	1	2	3	4
37. I treat others as individuals rather than just a member of the group	0	1	2	3	4
38. I demonstrate that problems must become chronic before I take action	0	1	2	3	4
39. I act in ways that build others' respect for me	0	1	2	3	4
40. I concentrate my full attention on dealing with mistakes, complaints, and failures ...	0	1	2	3	4
41. I consider the moral and ethical consequences of decisions	0	1	2	3	4
42. I keep track of all mistakes	0	1	2	3	4
43. I display a sense of power and confidence	0	1	2	3	4
44. I articulate a compelling vision of the future	0	1	2	3	4
45. I direct my attention toward failures to meet standards	0	1	2	3	4
46. I avoid making decisions	0	1	2	3	4
47. I consider an individual as having different needs, abilities, and aspirations from others	0	1	2	3	4
48. I get others to look at problems from many different angles	0	1	2	3	4
49. I help others develop their strengths.....	0	1	2	3	4
50. I suggest new ways of looking at how to complete assignments	0	1	2	3	4
51. I delay responding to urgent questions.....	0	1	2	3	4
52. I emphasize the importance of having a collective sense of mission.....	0	1	2	3	4
53. I express satisfaction when others meet expectations	0	1	2	3	4
54. I express confidence that goals will be achieved	0	1	2	3	4
55. I am effective in meeting others' job-related needs	0	1	2	3	4
56. I use methods of leadership that are satisfying	0	1	2	3	4
57. I get others to do more than they expected to do	0	1	2	3	4
58. I am effective in representing others to higher authority	0	1	2	3	4
59. I work with others in a satisfactory way.....	0	1	2	3	4
60. I heighten others' desire to succeed	0	1	2	3	4
61. I am effective in meeting organizational requirements	0	1	2	3	4
62. I increase others' willingness to try harder	0	1	2	3	4
63. I lead a group that is effective	0	1	2	3	4

Source of questions 19-63: Multifactor Leadership Questionnaire Form 5X-Short. © Copyright 1995, 2000 by Bernard Bass and Bruce Avolio. Published by Mind Garden Inc. All rights reserved.

**Thank you for your participation.
Please place completed questionnaire in postage-paid return envelope provided.**

Dear Foodservice/Clinical Nutrition Team Member,

Most people recognize the value of feedback to improve performance. However, little research on the role of upward communication within hospital food and nutrition services has been done. We appreciate your assistance in describing managerial performance and the effect of employee feedback on it.

This study has been approved by the Institutional Review Board (IRB) at Brigham Young University. If you have any questions about your rights as a participant, please contact Christopher Dromey, Chair of the IRB at (801) 422-6461. There are minimal risks associated with participation. Completion of this questionnaire indicates your willingness to participate. The code number on this questionnaire is for use in data analysis. Only combined results will be reported; individual responses will be kept confidential. **Because your completed questionnaire will be returned directly to the researchers, your supervisor/manager will not see your responses.**

The following questionnaire includes questions about yourself and your manager/supervisor. The questionnaire should take about 10 minutes to complete. Your participation is voluntary; however, in order to obtain a representation of foodservice/clinical nutrition employees and their supervisors, your participation is very important to us.

Once you have completed this questionnaire, please place it in the provided postage-paid business reply envelope and **return within 2 weeks of receiving it**. Again, your responses will only be seen by the researchers. Your manager/supervisor will not receive these responses.

We greatly appreciate your time and responses.

Sincerely,



Jessica Zetterquist, RD, CD
Graduate Student



Nora Nyland, PhD, RD, CD
Dietetics Program Director

DEPARTMENT OF NUTRITION, DIETETICS, AND FOOD SCIENCE
BRIGHAM YOUNG UNIVERSITY • S221 EYRING SCIENCE CENTER • PROVO, UTAH 84602
(801) 422-3912 • FAX (801) 422-0258 • UPWARDFEEDBACK@BYU.EDU

-
1. Ethnic Group:
 African American
 Asian and Pacific Islander
 Latino/Hispanic
 Native American
 White
 Other (Please Specify) _____
2. Gender:
 Female Male
3. Age:
 18-20 31-40 51-60
 21-30 41-50 61+
4. Level of Education:
(Please indicate highest degree received.)
 Some High School Education
 GED
 High School Diploma
 Associate Degree
 Bachelor's Degree
 Some post-grad, but no degree
 Master's Degree
 Doctoral Degree
Degree Area: _____
5. I am a:
____ Registered Dietitian
____ Dietetic Technician, Registered
____ Other: _____
6. What is your job title?

7. Your pay/salary:
 \$5,000-\$9,999/year
 \$10,000-\$19,999/year
 \$20,000-\$29,999/year
 \$30,000-\$39,999/year
 \$40,000-\$49,999/year
 \$50,000-\$59,999/year
 \$60,000-\$69,999/year
 > \$70,000/year
8. My position is considered:
 Full-time Part-time
9. Time period in current position:
 Less than 1 year
 1-2 years
 3-5 years
 6-8 years
 9-11 years
 12-14 years
 ≥15 years
10. In general, I enjoy my job:
 Strongly agree
 Agree
 Somewhat Agree
 Neither Agree nor Disagree
 Disagree
 Strongly Disagree
11. How often do you give **formal written** feedback to your supervisor regarding his/her performance as a supervisor (using an evaluation form)?
 Never
 Less than once a year
 1-2 times per year
 3-4 times per year
 5+ times per year
12. How often do you give **informal** feedback to your supervisor regarding his/her performance as a supervisor (written or oral)?
 Never
 Less than once a year
 1-2 times per year
 3-4 times per year
 5+ times per year
13. In general, my supervisor seeks my feedback regarding his/her performance as a supervisor:
 Never
 Seldom (Less than once per year)
 Occasionally (1-2 times per year)
 Quite often (3-4 times per year)
 Frequently (5+ times per year)
-

Use the following scale to rate how frequently the followings statements describe your immediate *Manager/Supervisor*.

Circle the appropriate number.

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

THE PERSON I AM RATING ...

14. Provides me with assistance in exchange for my efforts.....	0	1	2	3	4
15. Re-examines critical assumptions to question whether they are appropriate.....	0	1	2	3	4
16. Fails to interfere until problems become serious.....	0	1	2	3	4
17. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards.....	0	1	2	3	4
18. Avoids getting involved when important issues arise.....	0	1	2	3	4
19. Talks about their most important values and beliefs.....	0	1	2	3	4
20. Is absent when needed.....	0	1	2	3	4
21. Seeks differing perspectives when solving problems.....	0	1	2	3	4
22. Talks optimistically about the future.....	0	1	2	3	4
23. Instills pride in me for being associated with him/her.....	0	1	2	3	4
24. Discusses in specific terms who is responsible for achieving performance objectives.....	0	1	2	3	4
25. Waits for things to go wrong before taking action.....	0	1	2	3	4
26. Talks enthusiastically about what needs to be accomplished.....	0	1	2	3	4
27. Specifies the importance of having a strong sense of purpose.....	0	1	2	3	4
28. Spends time teaching and coaching.....	0	1	2	3	4
29. Makes clear what one can expect to receive when performance goals are achieved.....	0	1	2	3	4
30. Shows that he/she is a firm believer in "if it ain't broke, don't fix it.".....	0	1	2	3	4
31. Goes beyond self-interest for the good of the group.....	0	1	2	3	4
32. Treats me as an individual rather than just a member of the group.....	0	1	2	3	4
33. Demonstrates that problems must become chronic before taking action.....	0	1	2	3	4
34. Acts in ways that build my respect.....	0	1	2	3	4
35. Concentrates his/her full attention on dealing with mistakes, complaints, and failures.....	0	1	2	3	4
36. Considers the moral and ethical consequences of decisions.....	0	1	2	3	4
37. Keeps track of all mistakes.....	0	1	2	3	4
38. Displays a sense of power and confidence.....	0	1	2	3	4
39. Articulates a compelling vision of the future.....	0	1	2	3	4
40. Directs my attention toward failures to meet standards.....	0	1	2	3	4
41. Avoids making decisions.....	0	1	2	3	4
42. Considers me as having different needs, abilities, and aspirations from others.....	0	1	2	3	4
43. Gets me to look at problems from many different angles.....	0	1	2	3	4
44. Helps me develop my strengths.....	0	1	2	3	4
45. Suggests new ways of looking at how to complete assignments.....	0	1	2	3	4
46. Delays responding to urgent questions.....	0	1	2	3	4
47. Emphasizes the importance of having a collective sense of mission.....	0	1	2	3	4
48. Expresses satisfaction when I meet expectations.....	0	1	2	3	4

Continued on next page →

	Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
	0	1	2	3	4
49. Expresses confidence that goals will be achieved	0	1	2	3	4
50. Is effective in meeting my job-related needs	0	1	2	3	4
51. Uses methods of leadership that are satisfying	0	1	2	3	4
52. Gets me to do more than I expected to do	0	1	2	3	4
53. Is effective in representing me to higher authority	0	1	2	3	4
54. Works with me in a satisfactory way	0	1	2	3	4
55. Heightens my desire to succeed	0	1	2	3	4
56. Is effective in meeting organizational requirements	0	1	2	3	4
57. Increases my willingness to try harder	0	1	2	3	4
58. Leads a group that is effective	0	1	2	3	4

Source of questions 14-58: Multifactor Leadership Questionnaire Form 5X-Short. © Copyright 1995, 2000 by Bernard Bass and Bruce Avolio. Published by Mind Garden Inc. All rights reserved.

Thank you for your participation.
Please place the completed questionnaire in postage-paid return envelope provided.

Estimado miembro del Equipo de Nutrición Clínica/Servicios Alimenticios:

La mayoría de las personas reconoce la importancia de la opinión de los clientes para mejorar el rendimiento. Sin embargo, no se ha investigado demasiado el papel de la comunicación con los superiores dentro de los sectores de nutrición y alimentación hospitalaria. Agradecemos su ayuda al describir el desempeño gerencial y el efecto de la opinión de los empleados sobre él.

Este estudio ha sido aprobado por la Junta Institucional de Revisión (Institutional Review Board, IRB) en la Universidad de Brigham Young. Si tiene alguna consulta sobre sus derechos como participante, comuníquese con Christopher Dromey, Presidente de la IRB al (801) 422-6461. La participación involucra riesgos mínimos. Completar este cuestionario indica su voluntad de participar. El código numérico de este cuestionario es para su uso en el análisis de datos. Sólo se informarán los resultados combinados; las respuestas individuales son confidenciales. **Debido a que el cuestionario que usted complete se entregará directamente a los investigadores, su supervisor/gerente no verá sus respuestas.**

El siguiente cuestionario incluye preguntas sobre usted y sobre su gerente/supervisor. Completarlo le tomará aproximadamente 10 minutos. Su participación es voluntaria; sin embargo, para poder obtener una muestra representativa de los empleados de nutrición clínica/servicios alimenticios y sus supervisores, su participación es muy importante para nosotros.

Cuando haya completado el cuestionario, póngalo en el sobre de envío prepago proporcionado y **envíelo dentro de dos semanas de recibir**. Le recordamos que sólo los investigadores leerán sus respuestas. Su gerente/supervisor no las recibirá.

Agradecemos sinceramente sus respuestas y su tiempo.

Cordialmente,



Jessica Zetterquist, RD, CD
Estudiante de postgrado



Nora Nyland, PhD, RD, CD
Directora del Programa de Dieta

DEPARTAMENTO DE NUTRICIÓN, DIETA Y CIENCIA DE LA ALIMENTACION.
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(801) 422-3912 • FAX (801) 422-0258 • UPWARDFEEDBACK@BYU.EDU

-
1. Grupo étnico:
 - Afroamericano
 - Asiático e isleño del Pacífico
 - Latino/Hispano
 - Nativo americano
 - Caucásico
 - Otro (especifique) _____
 2. Sexo:
 - Femenino Masculino
 3. Edad:
 - 18-20 31-40 51-60
 - 21-30 41-50 61+
 4. Nivel de educación:
(Indique el mayor título obtenido)
 - Algo de educación secundaria
 - Diploma de educación general
 - Diploma de educación secundaria
 - Título intermedio (Associate)
 - Licenciatura (Bachelor)
 - Postgrado sin título
 - Maestría
 - DoctoradoÁrea del título: _____
 5. Soy:
 - ___ Nutricionista registrado
 - ___ Técnico de dietética registrado
 - ___ Otro: _____
 6. ¿Cuál es el título de su empleo?

 7. Su sueldo/salario:
 - \$5,000-\$9,999 al año
 - \$10,000-\$19,999 al año
 - \$20,000-\$29,999 al año
 - \$30,000-\$39,999 al año
 - \$40,000-\$49,999 al año
 - \$50,000-\$59,999 al año
 - \$60,000-\$69,999 al año
 - > \$70,000 al año
 8. Mi cargo se considera:
 - Tiempo completo Parcial
 9. Tiempo en el cargo actual:
 - Menos de 1 año
 - 1-2 años
 - 3-5 años
 - 6-8 años
 - 9-11 años
 - 12-14 años
 - ≥15 años
 10. En general, disfruto de mi empleo:
 - Totalmente de acuerdo
 - De acuerdo
 - Parcialmente de acuerdo
 - Ni de acuerdo ni en desacuerdo
 - En desacuerdo
 - Totalmente en desacuerdo
 11. ¿Con qué frecuencia da opiniones **formales por escrito** a su supervisor sobre su rendimiento como supervisor (mediante un formulario de evaluación)?
 - Nunca
 - Menos de una vez al año
 - 1-2 veces al año
 - 3-4 veces al año
 - 5+ veces al año
 12. ¿Con qué frecuencia da opiniones **informales** a su supervisor sobre su rendimiento como supervisor (orales o por escrito)?
 - Nunca
 - Menos de una vez al año
 - 1-2 veces al año
 - 3-4 veces al año
 - 5+ veces al año
 13. En general, mi supervisor me pregunta mi opinión sobre su rendimiento como supervisor:
 - Nunca
 - Rara vez (menos de una vez al año)
 - Ocasionalmente (1-2 veces al año)
 - A menudo (3-4 veces al año)
 - Frecuentemente (5+ veces al año)
-

Use la siguiente escala para calificar con qué frecuencia estas afirmaciones describen a su Director/Gerente.

Encierre en un círculo el número correcto.

Definitivamente no	De vez en cuando	Algunas veces	A menudo	Frecuentemente o casi siempre
0	1	2	3	4

LA PERSONA A QUIEN ESTA CLASIFICANDO...

14. Proporciona asistencia a cambio de sus esfuerzos.....	0	1	2	3	4
15. Reexamina suposiciones críticas para analizar si éstas son adecuadas.....	0	1	2	3	4
16. No interfiere hasta que los problemas se tornan serios.....	0	1	2	3	4
17. Enfoca su atención en irregularidades, errores, excepciones y desviaciones de las normas fijas.....	0	1	2	3	4
18. Evita involucrarse cuando surgen asuntos importantes.....	0	1	2	3	4
19. Habla acerca de sus propios valores y creencias más importantes.....	0	1	2	3	4
20. Se ausenta cuando es necesario.....	0	1	2	3	4
21. Busca perspectivas opuestas al solucionar problemas.....	0	1	2	3	4
22. Habla con optimismo acerca del futuro.....	0	1	2	3	4
23. Infunde orgullo en usted por estar asociado con él/ella.....	0	1	2	3	4
24. Se refiere en términos específicos al determinar quién es responsable de haber logrado las metas de desempeño.....	0	1	2	3	4
25. Espera a que las cosas salgan mal antes de tomar medidas.....	0	1	2	3	4
26. Habla con entusiasmo acerca de lo que se debe lograr.....	0	1	2	3	4
27. Especifica la importancia de tener un fuerte sentido de propósito.....	0	1	2	3	4
28. Dedicar tiempo a enseñar y entrenar.....	0	1	2	3	4
29. Deja en claro lo que se puede esperar recibir cuando se logran las metas de desempeño.....	0	1	2	3	4
30. Demuestra ser un/una fiel creyente de que "si no está quebrado, no lo arregle.".....	0	1	2	3	4
31. Abandona sus intereses personales por el bien del grupo.....	0	1	2	3	4
32. Le trata a usted como individuo, en vez de como si fuera sólo un miembro del grupo.....	0	1	2	3	4
33. Demuestra que los problemas deben convertirse en crónicos antes de tomar medidas.....	0	1	2	3	4
34. Actúa de tal manera que hace que usted le respete.....	0	1	2	3	4
35. El/ella se concentra plenamente en tratar errores, quejas y fallas.....	0	1	2	3	4
36. Considera las consecuencias de las decisiones morales y éticas.....	0	1	2	3	4
37. Lleva cuenta de todos los errores.....	0	1	2	3	4
38. Demuestra un sentido de poder y confianza.....	0	1	2	3	4
39. Expresa clara y convincentemente su propia visión de futuro.....	0	1	2	3	4
40. Dirige la atención de usted hacia el incumplimiento de normas.....	0	1	2	3	4
41. Evita tomar decisiones.....	0	1	2	3	4
42. Considera que usted tiene diferentes necesidades, habilidades y aspiraciones a las de los demás.....	0	1	2	3	4
43. Hace que usted vea los problemas desde diferentes ángulos.....	0	1	2	3	4

Sigue en pagina siguiente→

Definitivamente no	De vez en cuando	Algunas veces	A menudo	Frecuentemente o casi siempre
0	1	2	3	4
44. Le ayuda a que desarrolle sus propios puntos fuertes	0	1	2	3 4
45. Sugiere nuevas formas de ver cómo terminar las tareas asignadas	0	1	2	3 4
46. Tarda en responder a preguntas urgentes	0	1	2	3 4
47. Enfatiza la importancia de tener un sentido colectivo de lograr una misión	0	1	2	3 4
48. Expresa satisfacción cuando usted logra expectativas	0	1	2	3 4
49. Expresa confianza en que las metas serán logradas	0	1	2	3 4
50. Es eficaz en satisfacer las necesidades de usted relacionadas con el trabajo	0	1	2	3 4
51. Utiliza satisfactorios métodos de liderazgo	0	1	2	3 4
52. Hace que haga más de lo que usted mismo espera hacer	0	1	2	3 4
53. Es eficiente para representar a su grupo delante de las autoridades más altas	0	1	2	3 4
54. Trabaja con usted de manera satisfactoria	0	1	2	3 4
55. Eleva los deseos de usted de tener éxito	0	1	2	3 4
56. Es eficiente en lograr los requisitos organizacionales	0	1	2	3 4
57. Aumenta la disposición de usted de esforzarse	0	1	2	3 4
58. Encabeza un grupo eficiente	0	1	2	3 4

Fuente de las preguntas 14-58: Multifactor Leadership Questionnaire Form 5X-Short. © Copyright 1995, 2000 por Bernard Bass y Bruce Avolio. Publicado por Mind Garden Inc. Todos los Derechos Reservados.

Gracias por su participación.
Ponga el cuestionario completo en el sobre de envío prepago proporcionado.

Phase II Email Follow-Up #1

Hello again!

We would really appreciate your participation in our research—it will take just 10 minutes of your time. **Simply reply to this email with the number of employees that report directly to you** (and indicate if you need any surveys in Spanish). You'll then receive the appropriate number of short questionnaires in the mail. If you'd like more information about our study, please see the email below or click [here](#).

We value your participation and look forward to your participation in our research.

Sincerely,

Jessica Zetterquist, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD
Dietetics Program Director

Phase II Email Follow-Up #2

Hello again,

We promise this is the last time we'll contact you! But we'd really like to include you in our study--it will take just 10-15 minutes of your time. **Simply reply to this email with the number of employees that report *directly* to you** (and indicate if you need any surveys in Spanish). You'll then receive the appropriate number of short questionnaires in the mail. If you'd like more information about our study, please see the email below or click [here](#).

We value your insights and look forward to your participation in our research.

Sincerely,

Jessica Zetterquist, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD
Dietetics Program Director

Phase II Survey: Follow-up #1

Hello again! We appreciate your willingness to participate in our study.

Received manager but not subordinates

Though we have received your survey, we haven't received back any of the surveys from your employees. We encourage you to remind your employees to complete and return their surveys as soon as possible.

Received manager and some subordinates

Though we have received your survey, we have only received a few of the surveys from your employees. We encourage you to remind your employees to complete and return their surveys as soon as possible.

Received some subordinates but no manager

Though we have received the surveys from your some of your employees, we haven't received yours. If you could take a few minutes to complete and return the survey, we would appreciate it. We also encourage you to remind your employees to complete and return their surveys as soon as possible.

Received neither subordinate nor manager

However, we haven't received back any of the surveys sent to your facility. If you could take a few minutes to complete and return the survey, we would appreciate it. We also encourage you to remind your employees to complete and return their surveys as soon as possible.

Also, we'd be happy to supply additional surveys if any of the surveys have been misplaced.

Thanks in advance!

Sincerely,

Jessica Zetterquist, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD
Dietetics Program Director

Phase II Survey: Follow-up #2

Hello again,

I hope you're enjoying a wonderful holiday season. Your contribution to our research is very important to us.

Received manager but not subordinates

Though we have received your survey, we haven't received back any of the surveys from your employees. We encourage you to remind your employees to complete and return their surveys as soon as possible.

Received manager and some subordinates

Though we have received your survey, we have only received a few of the surveys from your employees. We encourage you to remind your employees to complete and return their surveys as soon as possible.

Received some subordinates but no manager

Though we have received the surveys from your some of your employees, we haven't received yours. If you could take a few minutes to complete and return the survey, we would appreciate it. We also encourage you to remind your employees to complete and return their surveys as soon as possible.

Received neither subordinate nor manager

However, we haven't received back any of the surveys sent to your facility. If you could take a few minutes to complete and return the survey, we would appreciate it. We also encourage you to remind your employees to complete and return their surveys as soon as possible.

Also, we'd be happy to supply additional surveys if any of the surveys have been misplaced.

Thanks in advance! And happy holidays!

Sincerely,

Jessica Zetterquist, RD, CD
Graduate Student

Nora Nyland, PhD, RD, CD
Dietetics Program Director

Phase II Survey: Follow-up #3 Email

Hello,

First off, we don't want to become obnoxious, so this is the last time you'll hear from us! We promise!

If you haven't already, you'll be receiving a packet from us in the mail. This packet includes the number of questionnaires that we have not received from your facility. Please take a minute to distribute the employee questionnaires to those who have not sent in their questionnaires yet.

Thank you in advance! We greatly value your time and contribution to our research.

Sincerely,

Jessica Zetterquist, RD, CD
Graduate Student

Nora Nyland, PhD, RD
Dietetics Program Director

Phase 2 Survey: Follow-up #3 Packet insert

Hello again!

The enclosed questionnaires probably look familiar. We know that you've been busy, so we'd like to give you and your employees one last chance to complete our questionnaire. The number of questionnaires included reflect the number we haven't received from your facility. Please only distribute questionnaires to employees who didn't complete the first questionnaire they were given.

Your responses are critical to the completeness of our research. Please take just a few minutes to complete and return the questionnaires in the envelopes provided.

Thank you!

Sincerely,

Jessica Zetterquist, RD, CD
Graduate Student

Nora Nyland, PhD, RD
Dietetics Program Director