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### Perceived Motivational Factors among Allied Health Managers and Subordinates

A study of motivational factors among occupational and physical therapist managers and subordinates

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#### ABSTRACT

This exploratory study sought to assess the differences in perceptions among allied health managers and subordinates regarding motivation in the workplace due to a paucity of literature in this area. With an increased demand for higher productivity, an ever-changing health care system and managed care restrictions, it is also important to understand what may motivate individuals who are functioning within different work environments than in the past. The hygiene and motivator factors from Herzberg's two factor theory created the independent variables which overlap with Maslow's Hierarchy of Needs descriptions. These included Basic (job security, salary etc.), Safety (work conditions, pension), Ego-Status (opportunity for status improvement), and Actualization-Self-Expression (opportunities for freedom and experimentation. Participants included a random and convenience sample of physical and occupational therapists. Data was collected using work motivation inventories. Results from the t-test and ANOVA procedures consistently showed no statistical differences among allied health managers and subordinates regarding their perceptions of what motivates the employee in the workplace. Motivator factor issues were identified as constraints to work motivation more than hygiene factors. The convenience sample identified Categories D and E more frequently as constraint categories (Sig. at .10 level). Clearly, additional research is needed in this area.

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#### INTRODUCTION

There is a paucity of research in occupational and physical therapy professional literature related to motivational aspects of work. It is with this in mind, as well as the guiding literature in nursing research, that this area was explored. Occupational and physical therapists can function in very similar environments when addressing the needs of people with certain conditions. These helping professions seek to improve the quality of life for a diverse group of children and adults.

Allied health managers have been faced with increasing challenges of professional diversity with consolidation of departments, budget cuts and downsizing due to the effects of the shifts in Medicaid and Medicare coverage.<sup>1</sup> These economic and political changes, coupled with the continuing forces of the managed care environment, have a direct impact on the delivery of occupational and physical therapy services. Professional role and practice changes, as well as a need to maintain a humanistic approach within the context of organizational financial gain have been cited as particular concerns.<sup>2</sup> It is important to establish current perceptions of motivational factors under these changing health-care, economic, and political conditions to improve manager effectiveness in health-care organizations today.

Many contemporary authors have defined motivation. Kreitner,<sup>3</sup> refers to motivation as a psychological process that gives direction to behavior; Higgins<sup>4</sup> defines motivation as an internal drive that is present to satisfy unmet needs. Bedeian<sup>5</sup> describes motivation as a will to achieve.

Nahavandi and Malekzadeh also associate the concept of motivation with management issues related to organizational performance. They define motivation as a "state of mind, desire, energy, or interest that translates into action."<sup>6</sup> This action is viewed as work performance. The belief is that this performance can be influenced when employee motivation is influenced. Employee motivation can be influenced due to motivation being a flexible state of mind.<sup>6</sup>

Managerial concerns related to employee motivation are not new but questions concerning motivational incentives, and employees' perceptions of what motivates them in the workplace continue to be discussed and analyzed.<sup>7,8</sup> Many motivational theories exist in an attempt to answer these questions related to motivational issues.<sup>7,8,9</sup> Process approach theories seek to answer the question "How are people motivated?" Theories in this category include Vroom's Expectancy Theory and Skinner's Reinforcement Theory.<sup>8,10</sup>

Herzberg, Mausner, & Snyderman discovered through qualitative studies that a group of factors could be identified as "dissatisfiers", such as poor working conditions or organizational policies.<sup>7</sup> If these situations were present, they could lead to an unhappy employee. However, if they were improved, this did not independently make a happy employee.

The term "hygiene" was designated to represent the dissatisfiers that impact one's attitude towards the job. The analogy to medical hygiene was made with reference to removing hazards from the environment when there are unfavorable working conditions that contribute to low job attitudes. The factors that lead to a positive view about one's job satisfy a person's need for self-actualization in his or her work. These factors were labeled as "motivators," since they contribute to a person's approach nature to a job. Herzberg's two-factor theory formed the basis for this exploratory study.

### **HEALTH WORKERS AND MOTIVATION**

Articles on the application of Herzberg's theory in healthcare related environments are limited. Among the allied health professional journals, nursing literature has the most on managerial aspects, motivation and job satisfaction. An article by Munro sought to explore the validity of Herzberg's two factor theory.<sup>11</sup>

The objective of the study was to determine which variables account for the variation in job satisfaction among recent nursing student graduates. The specific research question was: "What is the multiple correlation between overall job satisfaction and set predictors, which include motivators, hygiene, sex of respondent, socioeconomic status, self esteem, and length of time on the job"?

The subjects were 329 nurses, including 50 diploma level nurses, 159 associate degree nurses and 120 Bachelors level nurses. This was 2% of the entire national longitudinal study sample. The data reviewed was part of the fourth data collection set for this sample and was collected during 1979 and 1980.<sup>11</sup>

Each nurse completed a mailed questionnaire dealing with demographic information as well as educational and work experiences, plan, attitudes and opinions. There were 13 items relating to job satisfaction. They were measured on a Likert scale that ranged from dissatisfied to very satisfied.

The findings led the authors to conclude that some individuals consider hygiene factors as motivators. Working conditions, status and security may operate as motivators within this particular profession. It was questioned whether gender differences (primarily female) could have impacted the results. It was suggested that females may value hygiene factors more significantly than males. The authors also suggested that further research should incorporate an exploration on the effect of management styles on job satisfaction as well.<sup>11</sup>

In another article by nurses Rantz, Scott and Porter, the authors explored employee motivation as compared to factors that Herzberg had originally identified.<sup>12</sup> Achievement, recognition, work itself, responsibility and advancement were identified as motivators based on Herzberg's seminal work. Results from Herzberg's work were compared and contrasted to the results of a recent qualitative study intended to explore management effectiveness. The primary purpose of the study was to explore employee motivation and how motivation may have changed since the original research of Herzberg in order to contribute to managerial effectiveness in work settings.<sup>12</sup>

The researchers interviewed 38 healthcare employees and managers in public and private sectors, using open-ended questions, similar to Herzberg's methodology in his landmark study. Data was collected through open-ended questions probed for key

concepts from Herzberg's original work. The semi-structured in-depth interviews included questions related to job experiences that were positive and negative. Key questions for analysis included the following:

- a. "What are the perceptions of employees about effective and ineffective managers?"
- b. "What are the perceptions of employees about what motivates them?"
- c. "How do managers impact motivation and productivity of employees?" (Rantz, Scott & Porter, 1996).

Overall results reflected a noticeable similarity to Herzberg's work with some exceptions.<sup>12</sup> Recognition, the work itself, and responsibility continue to be considered the most motivating factors in the work setting. An exception to Herzberg's findings was a difference in perceptions of social factors as motivating factors. Interpersonal relations, traditionally thought of as a hygiene factor not a motivator factor, were identified as a motivating factor by most of the subjects. It exceeded all other categories in the frequency in which employees discussed it.

Although this sample size was quite limited, this still leads to further questioning about the dichotomous nature of motivation-hygiene theory. It also encourages exploration of today's work environmental issues in the context of ever changing healthcare situations as they relate to motivation on the job. With frequent job changes and work responsibility changes while on the job, it would appear that factors that influence motivation may be more difficult to attain.

An article by Smith describes a study on job satisfaction that was done with occupational therapists.<sup>13</sup> Although this article does not relate to Herzberg's two factor Theory, it is of particular importance due to the sample of allied health workers, specifically occupational therapists. It is also relevant due to the exploration of the impact of today's health care arena on job satisfaction of these allied health workers.

The purpose of the study was to examine job satisfaction in the context of current changes in health care environments and practices. Changes that were identified by the author included a growing elder population, a shift in health perspectives to wellness and prevention, and decreased funding for allied health services.<sup>13</sup>

An evaluation of the effects of these changes on the occupational therapy practitioner was done by sending a survey to 20 facilities that employ occupational therapists and occupational therapy assistants. These facilities were hospitals, outpatient clinics, and inpatient rehabilitation facilities that treat individuals with physical disabilities.<sup>13</sup>

The results indicated that neither supervision structure or treatment planning processes have a significant relationship to job satisfaction. The job characteristics of feedback on the job, task significance, autonomy and skill variety showed the greatest impact on job satisfaction.

The authors conclude that supervision can be enhanced by the use of the satisfiers that were identified by the respondents. For instance, if the supervisor provides feedback and opportunities for autonomy, then the employee is more likely to be satisfied in the workplace. Recommendations for future studies included a comparison of responses between occupational therapists and occupational therapy assistant responses and studies that incorporate occupational therapists working in community-based settings.

The findings of this study relate to Herzberg's findings, although they were not specifically identified as such. Herzberg's findings indicated that the fulfillment of hygiene needs, such as supervision and administrative practices, cannot independently result in job satisfaction. However, the reduction or elimination of them can cause dissatisfaction.<sup>7</sup> The satisfiers in Smith's study also relate to the satisfiers or motivators identified in Herzberg's work, such as achievement, recognition and the work itself. The findings support the original work of Herzberg by identifying a dichotomous nature of variables that influence work behavior and attitudes.

The roles and functions of managers and subordinates in health care settings are quite different and yet an awareness of respective perceptions could facilitate improved job performance. Schell and Slater identify core competencies for the manager in today's health care arena.<sup>14</sup> These include an ability to use visionary leadership to support staff member performance and enhance employee commitment to organizational mission and goals.

With an ever-changing health care environment, it is even more important for managers to ensure that clinicians are efficient and productive. Recognizing what motivates an individual to perform optimally will enhance the manager's ability to provide a supportive work environment.<sup>15</sup>

## METHODOLOGY

### Definitions

The multidimensional concept of motivation has been noted in the literature as difficult to define due to an inability to directly observe it.<sup>16</sup> By observing one's behavior, conclusions are typically drawn regarding motivation. The assumption is made that an inner drive directs and maintains motivation that results in certain behaviors.<sup>16</sup> With this "inner drive" nature of motivation, it may be best measured through self-reflection of a variety of situations related to what motivates or what constrains one from being motivated in the workplace. For the purposes of this study motivation is defined as the inner force that drives one to accomplish personal and organizational goals.<sup>17</sup>

The independent variables are the various factors associated with impacting motivation, including recognition for work and opportunities for growth. These are categorized as motivators from Herzberg's work.<sup>7</sup> Hygiene factors, such as work environment and organizational policies, as well as social belonging will also be considered as independent variables. The following categories of motivator and hygiene factors will be used for distinction of the variables and to establish a relationship with terms used in the instruments of choice. Motivators Ego-Status – This category refers to experiences that focus on achieving status within a work group, recognition for competence, and opportunities for skill display.<sup>18</sup>

Actualization and Self-Expression – This category reflects involvement with challenging and creative opportunities. Freedom of expression and opportunities for experimentation are an integral part of this category.<sup>18</sup>

### Hygiene Factors

**Basic** – This category includes pleasant working conditions and environmental supports. Monetary rewards are considered important for personal and/or family comfort and to obtain material possessions. The nature of the work itself is not the crucial aspect.<sup>18</sup>

**Safety and Order** – This category includes security and predictability. There is a need for minimal change and a desire to protect fringe benefits. The job provides a means to live comfortably.<sup>18</sup>

**Belonging and Affiliation** – This category refers to social relationships in the workplace. There is a preoccupation with being accepted and building relationships through work experiences. Jobs are seen as opportunities for establishing interaction with colleagues.<sup>18</sup>

The purpose of this particular study was to assess the differences in perceived motivational factors between occupational and physical therapy managers and their subordinates. In addition, constraints or limitations to motivation were also assessed.

### Research Design

A questionnaire was given to 300 allied health (occupational and physical therapists) managers and subordinates, with a desired return of a minimum of 150 (50%). The questionnaires were mailed to the managers with a cover letter explaining the intent of the research (gain an understanding of motivating factors among managers and employees in today's healthcare environment), and a request to give a complimentary survey to a randomly selected subordinate.

Random sampling was used from lists of occupational and physical therapists who receive the Administrative/Management Newsletters from their respective national organizations. Stratified sampling was done to ensure similar numbers of occupational and physical therapists from four states representing different geographical areas of the United States. These states were also chosen due to greater numbers of therapists in each state as well. The four states included California, Michigan, Florida and New York. Convenience sampling was also used to increase the number of participants when mail returns were limited. The representation of this sample is discussed in the presentation of the findings.

### Instruments

The Work Motivation Inventory (WMI) and the Management of Motives Index (MMI) were used to measure motivational factors of the worker.<sup>18,19</sup> The WMI is used to provide a motivational profile. It is designed to assess the perceived needs and values of

employees in workplace decision making. It is used in companion with the MMI which provides insight into how the manager perceives motivating factors of the employee. Each tool asks the participant to complete 60-item paired comparison items. For each item the participant must indicate which description is most characteristic of how they feel. Five points must be distributed between the pair in each item.

In order to identify "constraints", an instrument item was chosen that reflects barriers to motivation. The repeated statement on the Work Motivation Index states "I believe my morale and overall motivation would suffer most in a job situation wherein..."<sup>19</sup> This may be interpreted as a constraint due to the indication of something blocking or limiting motivation on the job. The respondent then distributed 5 points between the two responses that followed. The two responses reflect hygiene and motivator areas respectively. The numbers given to each response indicated what is more or less characteristic of an individual. If an item was weighed more than the number 3 in any of the five motivation categories of the instrument, this was identified as a notable

Used together, these instruments highlight differences in perceptions between employees and managers about motivational factors in the workplace. Reliability for this test has been established at .70. Construct validity is high, yielding a correlation of .79 with the MMI. The WMI is considered suitable for research purposes.<sup>20</sup>

### **Data Analysis**

Analysis was done utilizing a variety of statistical methods. Descriptive statistics were used to assess the mean and standard deviations. The t test was used to assess the differences in perceptions of motivators between occupational and physical therapists, managers and subordinates, and females and males. This technique was also used to assess the differences among therapists regarding their perceptions of motivational constraints in the workplace.

The analysis of variance technique, ANOVA, was employed to assess the differences among therapists with varying years of experience (3 categories) and different work settings (4 categories).

### **RESULTS**

Out of the 300 questionnaires that were sent out, 57 were returned. This indicated a 19% return. Only one of these questionnaires was unable to be used due to missing data. Five questionnaires were returned that were not completed with accompanying comments stating why the individual could not participate. These reasons included retirement, unemployment or self-employment. One individual stated that the questionnaire was too difficult to fill out and due to frustration she would not complete it.

Table 1. illustrates the demographic make-up of the sample that responded. As indicated, there were 25 managers and 31 staff level therapists; 39 occupational therapists and 17 physical therapists; 47 females and 9 males; 19 therapists working in an in-patient setting, 12 working in an out-patient setting, 16 working in "other" which included schools, home health or academia and 9 working in a combination of settings. Nine therapists had 0-5 years of experience, as well as an equal number for 6-10 years of experience. Most of the occupational and physical therapists that participated had several years of experience, with 38 of them having over 10 years in a clinical or community setting.

**Table 1. Sample Description**

CATEGORY LEVEL	FREQUENCY	PERCENTAGE
<b>Manager</b>	25	44.6
<b>Staff</b>	31	55.4
<b>Total</b>	56	100.0
<b>PROFESSION</b>	39	69.6
<b>Occupational Therapist</b>	17	30.4
<b>Physical Therapist</b>	56	100.0
<b>Total</b>		
<b>WORK SETTING</b>	19	33.9
<b>In-patient</b>	12	21.4
<b>Out-patient</b>	16	28.6
<b>Other</b>	9	16.1
<b>Combination</b>	56	100.0
<b>Total</b>		
<b>EXPERIENCE</b>		16.1
<b>0-5 years</b>	9	16.1
<b>6-10 years</b>	9	67.9
<b>11 + years</b>	38	100.0
<b>Total</b>	56	

Following the initial data collection phase, it was realized that a potentially low response rate from mail questionnaires could occur. Convenience sampling was incorporated to increase the number of participants. In order to evaluate whether the convenience sample was as representative as the random sample, comparisons between the two groups were made. It was anticipated that with access to a convenience sample, the majority of respondents would be from Florida, however, there were an equal number of participants between California and Florida, as indicated in Table 2. There were also an equal number of random sample and convenience sample participants, with 28 individuals in each group.

**Table 2. Number of Respondents from Each State**

States	Frequency	Percent
<b>Florida</b>	20	35.7
<b>California</b>	20	35.7
<b>Michigan</b>	11	19.6
<b>New York</b>	5	9.0
<b>Total</b>	56	100.0

Statistical analysis, in the form of a t-test, revealed that the random and convenience samples showed no statistically significant differences in their general scores for each of the five categories on the instrument (See Tables 3 and 4). Category A represents the Basic area of motivation relating to working conditions and salary, Category B represents the Safety area that relates to interests in benefits, and a safe working environment. Category C relates to the social belonging aspect of motivation. Individuals who are motivated by social networks and affiliation identify with this category. Category D relates to ego-status motivational needs. These areas consist of a desire to excel and achieve greater rank in the workplace. The last category, Category E relates to motivation that is connected to actualization and self-expression. Individuals in this category seek opportunities that offer freedom to experiment and create (Hall & Williams, 2000). Participants in both samples responded similarly.

**Table 3. Comparison Means of Convenience and Random Samples for Each Instrument Category**

Sample	Number	Mean	Standard Deviation
Category A	28	52.61	11.157
Convenience	28	51.64	11.432
Random			
Category B	28	50.57	9.402
Convenience	28	52.36	9.449
Random			
Category C	28	58.36	8.256
Convenience	28	61.46	0.819
Random			
Category D	28	63.82	7.252
Convenience	28	62.86	7.725
Random			
Category E	28	74.64	11.685
Convenience	28	72.04	11.213
Random			

**Table 4. Results of the t-test for Equality of Sample Means**

Categories (Equal Variances Assumed)	t	df	Sig. (2-tailed)	Mean Difference
Category A	.319	54	.751	.96
Category B	-.709	54	.481	-1.79
Category C	-1.282	54	.205	-3.11
Category D	.482	54	.632	.96
Category E	.852	54	.398	2.61

The differences that were analyzed included perceptions of influences on motivation, including hygiene and motivator aspects of Herzberg's two factor theory, among manager and staff level personnel. Differences between occupational and physical therapists was also analyzed.

#### Managers and Subordinates

Twenty-five managers and 31 subordinates responded completely to the questionnaires. Table 5. consists of the group statistics for manager and subordinate category responses. The mean points for Category A among the managers was 54.16.

The mean points for the same Category A among the subordinates was 50.48. For Category B the mean points for the managers was 52.44, and 50.68 for the subordinates. In category C there was even more similarity with the mean score for managers being 60.12 and 59.74 for the subordinates. This category reflects common perceptions among supervisors and subordinates regarding the impact of social belonging on motivation in the work place. Rather than demonstrating differences, as anticipated, the groups were quite similar in their perceptions. In Category D, the participants also showed very similar responses with a mean score of 63.20 for the managers and 63.45 for the subordinates. This category reflects concern for opportunities for advancement and status improvement in relationship to motivation. Lastly, in Category E, the managers' mean score was 70.48 and the subordinates mean score was 75.65.

**Table 5. Group statistics for Therapy Managers and Subordinates**

Category	Position Level	N	Mean	Std. Deviation
<b>A Basic</b>	Manager	25	54.16	10.238
	Subordinate	31	50.48	11.832
<b>B Safety</b>	Manager	25	52.44	9.678
	Subordinate	31	50.68	9.221
<b>C Social</b>	Manager	25	60.12	9.985
	Subordinate	31	59.74	8.532
<b>D Status</b>	Manager	25	63.20	7.659
	Subordinate	31	63.45	7.384
<b>E Actualization</b>	Manager	25	70.48	10.096
	Subordinate	31	75.65	12.057

Table 6. indicates the t-test results that show no statistical difference between the managers and subordinates regarding perceptions of factors that impact motivation in the work place.

**Table 6. Results of the t-test for Equality of Means Between Managers and Subordinates**

Category		t	df	Sig. (2-tailed)	Mean Difference
<b>A</b>	Equal variances assumed	1.223	54	.225	3.68
<b>B</b>	Equal variances assumed	.696	54	.490	1.76
<b>C</b>	Equal variances assumed	.153	54	.879	.38
<b>D</b>	Equal variances assumed	-1.25	54	.901	-.25
<b>E</b>	Equal variances assumed	-1.711	54	.093	-5.17

### Occupational and Physical Therapists

There was a similar outcome between physical and occupational therapists, however a number discrepancy existed. There were 42 occupational therapists that responded and only 14 physical therapists. Means for each of the instrument categories were again similar with the closest comparisons being in Category C and Category D (See Table 7). The mean score for the occupational therapists in Category C was 59.69, and 60.57 for the physical therapists. In Category D, the occupational therapists' mean score was 63.69 and the physical therapists' mean score was 62.29. The greatest difference in mean scores was in Category E, with occupational therapists having a mean score of 74.45, and physical therapists having a mean score of 70.00. Again, there was no statistically significant difference between these groups, as indicated by Table 8.

**Table 7. Group statistics for Occupational and Physical Therapists**

Category	Profession	N	Mean	Std. Deviation
A Basic	OT	42	51.43	11.785
	PT	14	54.21	9.308
B Safety	OT	42	50.74	9.402
	PT	14	53.64	9.320
C Social	OT	42	59.69	9.608
	PT	14	60.57	7.773
D Status	OT	42	63.69	7.928
	PT	14	62.29	5.863
E Actualization	OT	42	74.45	11.353
	PT	14	70.00	11.381

**Table 8. Results of t-test for Equality of Means between Physical and Occupational Therapists**

Category		t	df	Sig. (2-tailed)	Mean Difference
A	Equal variances assumed	-.803	54	.425	-2.79
B	Equal variances assumed	-1.003	54	.320	-2.90
C	Equal variances assumed	-.310	54	.758	-.88
D	Equal variances assumed	.608	54	.546	1.40
E	Equal variances assumed	1.270	54	.210	4.45

**Constraints to Motivation**

When the respondents were divided into convenience and random sample categories, some interesting differences were revealed. Table 17. Indicates the number of constraint statements recorded for each of the instrument categories by convenience and random sample participants. Table 18. indicates that the convenience sample showed an increase in the number of constraints in categories D and E. Category A was omitted for the t-test, due to such a low number of identified constraints in this category. For Category D a .133 significance level was obtained. For Category E a .080 significance level was obtained. Categories D and E correlate with Ego-Status and Actualization-Self-Expression areas of the instrument. Both of these areas are considered "motivators" in relationship to Herzberg's two-factor theory. From an exploratory study context .10 may be considered statistically significant, therefore supporting the idea that certain aspects may prevent an employee from being motivated.

**Table 9. Group Statistics for the Means of Identified Constraints in each Instrument Category**

Category	Sample	Number of Constraints Identified	Mean	Std. Deviation
B Safety	Convenience	8	1.13	11.568
	Random	9	1.33	9.602
C Social	Convenience	8	1.75	9.378
	Random	10	2.00	9.158
C Status	Convenience	11	1.27	9.157
	Random	6	2.00	9.427
E Actual.	Convenience	11	1.64	7.641
	Random	6	2.40	6.285

**Table 10. Results of t-test for Constraint Identification Sample Differences**

Category		t	df	Sig. (2-tailed)	Mean Difference
B	Equal variances assumed	-.979	15	.343	-4.08
C	Equal variances assumed	-.535	16	.600	-1.17
D	Equal variances assumed	-1.590	15	.133	2.39
E	Equal variances assumed	-1.851	19	.080*	1.99

\* Significance level at .10.

The convenience sample revealed identification of constraints in a statistically significant manner (Sig at .10 level) for Category E, and close to significance in Category D. In general, however, Categories B through E were all identified as constraints, with Category E having the most frequency.

## DISCUSSION

This exploratory study sought to assess the differences in perceptions among allied health managers and subordinates regarding motivation in the workplace. There is a paucity of literature related to occupational and physical therapists' viewpoints about motivational factors in various health care arenas. With an increased demand for higher productivity, an ever-changing health care system and managed care restrictions, it is also important to understand what may motivate individuals who are functioning within different work environments than in the past.

It was felt that managers would consider hygiene factors similarly to the findings in Herzberg's work and that there would be an emphasis on job security and lower categories relating to motivation. However, it was felt that subordinates would identify social aspects as motivators, particularly due to the caring role of allied health professionals. This aspect of work distinguishes health care workers and could have possibly influenced the nature of motivation.

Results from the t-test and ANOVA procedures consistently showed no statistical differences among allied health managers and subordinates regarding their perceptions of what motivates the employee in the workplace. There were also no statistically significant differences between occupational and physical therapists.

All categories, with the exception of category A (Basic), were almost equally identified as areas of constraint to motivation. However, when the sample was divided between random and convenience samples, the convenience sample identified Categories D and E more frequently as constraint categories (Sig. at .10 level). Although the convenience and random samples showed no statistical differences in demographics or scores on the two instruments, their perceptions of what constrains motivation was different in a statistically significant manner. Rejecting the null hypothesis at the .10 level does not follow the .05 convention of hypothesis testing. However, the .05 level has historically been accepted as the upper limit on alpha.

Although the sample size was small, this finding supports the earlier work of Herzberg<sup>7</sup> by indicating the higher level "motivators" impact the motivation of employees in the workplace. Since the respondents identified issues related to the areas of Ego-Status and Actualization as constraints to motivation, it presents another way of viewing motivational factors. It is as worthy of assessing what prevents motivation, as assessing what promotes or enhances it.

The results regarding constraints also present a different approach to what Herzberg termed "dissatisfiers" or hygiene factors. The lower Categories (A and B in particular) were considered to be aspects of a job that would create feelings of dissatisfaction if not present or if not optimal. However, in this exploratory study, respondents indicated Categories B, C, D, and E as potential constraints to motivation. This was inclusive of two Categories that have traditionally been considered hygiene factors, and not motivator factors.

The most notable limitation of this exploratory study is the small sample size. A return of only 56 questionnaires resulted in statistical limitations. A small sample size can impact the statistical test by decreasing the sensitivity. Statistical tests have little power with small sample sizes when the effect size (difference in means) is small, which was the case in this study. Due to the

small sample size, there were number discrepancies that also limited statistical outcomes. For instance, there were three times as many occupational therapists than physical therapists that responded. Perhaps more therapists in the less experienced categories would have responded differently.

In addition to this limitation, the transition to the inclusion of convenience sampling was seen as necessary to ensure an increased number of respondents. Initial t-tests revealed this group to be quite representative of the random sample in gender, profession, and years of experience. However, inclusion of academic personnel in the convenience sample may have influenced the results of, in light of the increased restraints identified by the convenience sample. Perhaps the academic environment presents with other parameters that influence motivation in other ways. This is worthy of future study.

With a low response rate, and one returned questionnaire accompanied with comments regarding the difficulty of the survey, it is questioned whether the instrument format was a deterrent to receiving more completed forms. The actual booklet was 17 pages. This contained instructions, the actual questionnaire, and then several pages of explanation.

The respondents were asked not to open the sealed section with the explanations and not to complete the grid scoring, in order to reduce completion time. Actual scoring time could take 15-20 minutes. However, the appearance and bulk of the actual booklet could have been unappealing to therapists with time constraints. Verbal feedback from two individuals and written feedback from another reinforced this opinion.

Lastly, the sensitivity of the actual instrument was questioned following the data analysis phase. Factor Analysis results supported the notion that there may be other underlying structures and that more than five distinct categories of motivational factors may be present. Factor Analysis revealed no consistent patterns or clusters of factors for the instrument items. However, the small sample size could have limited these results.

## RECOMMENDATIONS

Although there was a small sample size in this pilot study, the results do point to more similarities than dissimilarities among managers and subordinates; occupational and physical therapists; and between groups in different work settings and with varying years of experience. This could present managers with a foundation to build on for optimal work relationships.

Continued studies regarding the differences between therapists in clinic and academic settings is also warranted, due to the preliminary findings on varying perceptions of motivational constraints. Occupational and physical therapists have multiple roles in a variety of settings. These roles are increasing as the diversity of community care continues to expand.

## CONCLUSION

In this exploratory pilot study, there were no statistical differences regarding perceptions of work motivation among allied health managers and subordinates. However, there were statistical differences between the convenience sample and the random sample regarding perceptions of motivational constraints. These preliminary results indicate a common ground for occupational and physical therapists on different professional levels, working in different environments, to optimize the work environment despite the demands of an ever-changing health care arena.

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