

Motivational Congruency and Discrepancy of Hawaiian Athletic Trainers

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ABSTRACT: *Motivation is an integral part of an effective organizational management scheme. In March 1992, we sent a survey designed to assess motivational preference to all certified athletic trainers in the State of Hawaii. The population included: 6 high school athletic trainers, 10 university athletic trainers, and 9 clinic athletic trainers. The surveys were completed and returned by 80% of the population. With the exception of being an integral part of a work team ($p < .05$), athletic trainers in the State of Hawaii showed little discrepancy in terms of motivation. Further, there are differences among the three groups of athletic trainers in rating the importance of motivators concerning being appreciated, receiving raises, and being an integral part of a team ($p < .05$). Differences in motivational factors among these three groups could be influenced by the organizational structure in which the athletic trainers operate. Further investigation should include a mainland population that includes athletic trainers in professional sports and the industrial setting.*

One of the most important aspects of motivation is the element of control of one's situation. When this factor is

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removed from the work environment, positive motivation is difficult. Creating an environment in which athletic trainers can be self-motivated, as well as grow and develop, demands that supervisors understand the relationships between various independent variables and the work motivation factors of their subordinates. Opportunities are available to improve productivity in athletic training environments with productivity measures similar to those for other industries. The key to improvement is finding adaptable measurement tools that can be applied to athletic training in a practical and meaningful way. In this investigation, we used a standardized motivational inventory to examine the motivational congruencies and discrepancies between and among athletic trainers in the state of Hawaii in three different employment settings: high school, university, and clinic. Without question, the ability to motivate a person's best effort has a direct impact on the success or failure of any organization (3). An example of motivation in organizations is provided by Peters and Waterman (17). The authors indicate that the productivity of an organization should be through its people, by creating an awareness that their best efforts are essential and that they will share in the rewards of the organization's success. Thus, motivation is an integral part of a productive management process. Yet, motivating individuals is a complex process with many variables. This can be especially true in the area of athletic training, where long hours of service are often accompanied by low pay, lack of appreciation and recognition, and extremely stressful conditions (6). In 1986, a case study on athletic training burnout examined a situation in which a university athletic trainer was "on the brink of hospitalization" due to "... lack of control of his job situation," "... no positive feedback," "... too many bosses to serve," and where he "... dreaded going to work"

(5). This is not an isolated example. It demonstrates that ill-conceived motivational schemes and poorly managed organizations not only reduce or hinder productivity in the work place but may have a devastating impact on a person's life in general.

Motivation is an interaction of the forces within the individual, the job, and the work environment. While supervisors can do little to make people work harder, they can design jobs and create work environments that support and encourage self-motivation. For instance, supervisors cannot tell employees that they must be more productive and expect substantial results. They can, however, remove barriers to productivity and innovation. Further, the supervisors can alter their style of directing the efforts of the employees to facilitate a more productive environment. Motivation and motivational criteria are popular subjects in organizational literature (7,8). In the area of leisure management, many authors (1,3,4,14,16) have substantiated the use of motivational schemes to increase productivity.

More recently, athletic trainers have extended their services beyond the boundaries of the "traditional setting" and have joined the private sector, working in sports medicine centers (13,19). In response, at least one author has suggested that the traditional undergraduate curriculum be revised to reflect the current and future employment trends of athletic trainers in the private sector (12). The emphasis of these changes is directed at the need for "...business-related expertise associated with management (12)."

With the current and future employment trends of athletic training shifting toward the private sector and the general importance of performance and productivity in all athletic training settings, the motivation of athletic trainers should be a paramount concern to these organizations.

Yet, a review of literature on the management process specific to motivation in athletic training is limited to performance evaluation (18) and organizational factors related to burnout (2).

Materials and Methods

Certified athletic trainers in the State of Hawaii comprised the population for this investigation. The population included 6 high school athletic trainers, 10 university athletic trainers and 9 clinic athletic trainers. The Hawaii Athletic Trainers' Association provided a mailing list of the 25 currently practicing certified athletic trainers in the state.

To assess motivational congruency and discrepancy, the Neal-Priest Inventory for Motivational Congruency or Discrepancy (15) was used. This instrument was developed from Herzberg's two-factor motivation/hygiene theory that was developed from interviews with workers in a number of professions (8). Most recently, this instrument and variations of it have been used to study differences and similarities between park and recreation professionals in Australia, Canada, Hong Kong, and the United States (3). The instrument uses 16 motive stems. The respondent is asked to rank order the 16 motive stems (in terms of individual importance as motivators), as well as rate each of the motive stems using a five-point Likert-type rating scale.

Twenty-five letters and surveys were mailed. Respondents were requested to rank order the 16 motivation statements (see Tables 2 and 3), to rate each one of the statements (see Table 4 for scale), and to provide a brief demographic profile (Table 1). A stamped, self-addressed envelope was provided for return of the instrument.

We employed the Kruskal-Wallis statistical test and Mann-Whitney U test to determine differences among the three groups represented in the study. The Kruskal-Wallis statistical test was employed to provide a statistical measure of the differences for both the rank order and ratings of the motive stems among the three groups. In research that uses rank order observations, the Kruskal-Wallis test is the appropriate statistical measure. The nonparametric Kruskal-Wallis one-way analysis of variance (ANOVA) (H) is analogous to the parametric one-way ANOVA (F test). However, the Kruskal-Wallis technique is used when the researcher wants to avoid the assumptions of the one-way

Table 1.—Demographics of Respondents by Group (n=20)

Demographics	High School (I) (n = 4)	University (II) (n = 8)	Clinic (III) (n = 8)
Educational Status			
Undergraduate	1 (25%)	1 (12.5%)	4 (50%)
Graduate	3 (75%)	7 (87.5%)	4 (50%)
Degree in Athletic Training			
Yes	1 (25%)	3 (37.5%)	7 (87.5%)
No	3 (75%)	5 (62.5%)	1 (12.5%)
Level of Degree in Athletic Training			
Undergraduate	1 (100%)	0	5 (71%)
Graduate	0	3 (100%)	2 (29%)
Years in Athletic Training Field			
Less than 2	0	0	1 (13%)
Between 2-5	1 (25%)	0	3 (38%)
Between 5-8	1 (25%)	1 (12%)	3 (38%)
Between 8-10	1 (25%)	2 (25%)	1 (13%)
More than 10	1 (25%)	5 (63%)	0
Years Certified as an Athletic Trainer			
Less than 1	0	0	2 (25%)
Between 1-2	0	1 (12%)	4 (50%)
Between 2-5	0	0	2 (25%)
Between 5-8	3 (75%)	2 (25%)	0
More than 10	1 (25%)	5 (63%)	0
Supervisors			
Athletic Director	4 (100%)	1 (12.5%)	0
Assistant Athletic Director	0	2 (25%)	0
PE Chair	0	1 (12.5%)	0
Head Athletic Trainer	0	4 (50%)	0
Clinic Administrator/PT	0	0	8 (100%)
Age			
22-25 years	0	0	1 (12%)
26-30 years	1 (25%)	2 (25%)	5 (63%)
31-35 years	2 (50%)	3 (37.5%)	2 (25%)
36-40 years	0	3 (37.5%)	0
41-45 years	1 (25%)	0	0
Gender			
Male	4 (50%)	5 (62%)	4 (50%)
Female	4 (50%)	3 (38%)	4 (50%)

ANOVA, when the measurement is weaker than the interval level, or when the number in each independent sample is small (less than five) (10, 20). Witte (20) notes that when observations are numerical ranks (such as some of the findings reported in this paper), there is no basis for speculating about whether the underlying populations are normally distributed with equal vari-

ances, as assumed in ANOVA. Therefore, the H test is appropriate and most useful when: 1) data are ranked, or 2) data are quantitative but don't seem to originate from normally distributed populations with equal variances (11, 20).

The Kruskal-Wallis statistical test allows for comparison of ranks in three or more groups and when the sample sizes are

uneven and small. However, the Kruskal-Wallis test simply provides overall results; it does not make specific comparisons. Therefore, we performed a Mann-Whitney U test among the three groups separately (two-group design) to determine which groups differed in the ranking and rating of the motive stems.

The Mann-Whitney U test is recommended for use with ranked data and with small sample sizes that may not have normal distributions and equal variances. Finally, we analyzed the demographics using a contingency table to evaluate percentages within and among groups. An alpha level of .05 was set for all statistical procedures.

Results

The surveys were completed and returned by 20 (80%) of the 25 certified athletic trainers in the state. The return represented 4 (67%) of the total high school population, 8 (80%) of the total university population and 8 (89%) of the total clinic population. The results of the study are presented in Tables 1 through 5.

Eleven (55%) of the 20 respondents were male, and 9 (45%) were female. The mean age was 31.6 (± 5.5) years. At the time of the study, the respondents had been in the field of athletic training 9.0 \pm 6.0 years and had been certified for 6.5 \pm 4.9 years. Table 1 presents the demographic information obtained from the respondents, by group.

Table 2 presents the rank order of the motivational items by all the responding athletic trainers with the mean scores (\pm SD) for the rank and rating of all 16 items. Respondents rank order of the motivational statements was basically identical except for one item (Table 3). Item M, being an integral part of a work team, was rated much higher (3rd) by university-certified athletic trainers than by high school or clinic-certified athletic trainers (12th, 13th; Mann-Whitney U < .05).

Significant differences ($p < .05$) were found to exist among groups for the rating of the motivational items J (being appreciated), L (receiving raises), and M (being an integral part of a work team) (Table 4). The results of the Mann-Whitney U test indicated that the high school athletic trainers significantly differed ($p < .05$) from the clinical athletic trainers regarding being appreciated, receiving raises, and being an integral part of the work team (Table 5). Clinical athletic trainers perceived these items to be more important than did the high school athletic trainers. The university athletic trainers did not rate receiving raises as high as the clinical athletic trainers ($p < .05$).

Discussion

The major finding of this investigation indicated that there are motivational schemes important to the athletic trainers in Hawaii, with little variation based upon their employment setting. However, the slight variation among groups should be evaluated in an attempt to improve the productivity of these athletic trainers.

There are two types of rewards we can receive: intrinsic and extrinsic. Intrinsic rewards stem from the work itself.

Table 2.—Rank Order of Motivational Items with Mean (\pm SD) for Rank and Rating (n=20)

Rank Order	Item	Motivational Items	Mean Rank (\pm SD)	Mean Rating (\pm SD)
1	(B)	Importance of work	2.85 (\pm 2.74)	4.90 (\pm 0.31)
2	(G)	Job growth	5.90 (\pm 4.32)	4.85 (\pm 0.37)
3	(I)	Good benefits and wages	5.95 (\pm 3.50)	4.75 (\pm 0.44)
4	(D)	Achieving work-related goals	6.40 (\pm 3.87)	4.70 (\pm 0.47)
5	(E)	Getting along with others	6.45 (\pm 3.85)	4.70 (\pm 0.57)
6	(N)	Job security	7.40 (\pm 4.96)	4.75 (\pm 0.55)
7	(H)	Good work conditions	7.45 (\pm 3.22)	4.50 (\pm 0.51)
8	(P)	Role in decision-making	7.55 (\pm 4.12)	4.65 (\pm 0.49)
9	(C)	Freedom on the job	7.60 (\pm 4.19)	4.50 (\pm 0.61)
10	(M)	Being part of a work team	8.70 (\pm 3.16)	4.55 (\pm 0.61)
11	(F)	Opportunities for advancement	8.80 (\pm 3.72)	4.55 (\pm 0.61)
12	(J)	Being appreciated	10.05 (\pm 4.31)	4.25 (\pm 0.72)
13	(K)	Helping organization obtain goals	11.45 (\pm 2.80)	4.30 (\pm 0.47)
14	(L)	Receiving raises	12.25 (\pm 3.19)	3.95 (\pm 0.67)
15	(O)	Feedback on performance	13.10 (\pm 2.59)	4.25 (\pm 0.55)
16	(A)	Designation as a leader	14.10 (\pm 3.11)	3.50 (\pm 0.76)

Table 3.—Rank Order of Motivational Statements by Groups with the Kruskal-Wallis H Values

Motivational Statement	Rank Order			K-W H*
	High School (n = 4)	University (n = 8)	Clinic (n = 8)	
A. Designation as a leader	16	16	15	1.26
B. Importance of work	2	1	1	0.90
C. Freedom on the job	9	11	4	2.56
D. Achieving work-related goals	10	5	2	2.11
E. Getting along with others	8	2	6	0.95
F. Opportunities for advancement	7	10	11	0.99
G. Job growth	4	4	5	0.72
H. Good work conditions	5	6	7	0.51
I. Good benefits and wages	1	9	3	5.58
J. Being appreciated	14	12	10	0.58
K. Helping organization obtain goals	11	13	14	2.79
L. Receiving raises	15	14	13	0.84
M. Being an Integral part of work team	13	3	12	8.34+
N. Job security	3	8	9	1.04
O. Feedback on performance	12	15	16	2.88
P. Role in decision-making	6	7	8	0.56

* Value required for significance at the .05 level, df = 2, is 5.99.

+ Significant $p < .05$; whereas High school differs from University (Mann-Whitney U)

Table 4.—Kruskal-Wallis H Values Between Three Groups On Rating* Motivational Stems

Motivational Statement	H between groups ^b
A. Designation as a leader	2.72
B. Importance of work	0.50
C. Freedom on the job	1.97
D. Achieving work-related goals	3.43
E. Getting along with others	2.63
F. Opportunities for advancement	1.72
G. Job growth	0.86
H. Good work conditions	0.71
I. Good benefits and wages	5.35
J. Being appreciated	6.06+
K. Helping organization obtain goals	2.00
L. Receiving raises	8.10+
M. Being an integral part of work team	6.68+
N. Job security	1.68
O. Feedback on performance	4.53
P. Role in decision-making	3.00

*Scale - 1= Extremely Unimportant, 2= Unimportant, 3 = Neutral, 4= Important, and 5= Extremely Important

^b Value required for significance at the .05 level, df = 2, is 5.99.

+Significant p < .05

Table 5.—Results of Significant Rating Differences Between Groups Using the Mann-Whitney U Test

Groups	COMPARISON Motivational Stem	U
High school vs. Clinic	J. Being appreciated	3+
	L. Receiving raises	2+
	M. Being an integral part of work team	1.5+
University vs. Clinic	L. Receiving raises	12+

+ Significant p < .05

Examples include the feeling of accomplishment after a job has been completed, the challenge of the task, or the pride one takes in doing an outstanding job. Extrinsic rewards include salary levels, fringe benefits, promotions, and encouragement from the supervisor.

Herzberg's model (8) described extrinsic rewards (hygiene-maintenance factors) as job "dissatisfiers" that may influence an athletic trainer's ability to perform duties. Specifically, these are: policies, pay, work conditions, employee/supervisor relationships, status, and job security. These factors could lead to job dissatisfaction if ignored by athletic directors, admin-

istrators, and other supervisors. Alternately, Herzberg called intrinsic rewards "motivators," since they seemed to be associated with job satisfaction, which he assumed motivated workers and led to increased productivity. These motivators, which may influence an athletic trainer's productivity, include: importance of work, freedom on the job, job growth, being an integral part of a work team, and having a role in the decision-making process.

The findings of this study provide some support for Herzberg's Motivation/Hygiene/ Maintenance theory of motivation. There is a broad consensus among the three groups of athletic trainers for the

following (intrinsic factors) motivators: the perceived importance of their work, job growth or enlargement, and achieving work-related goals. Further, three hygiene/maintenance (extrinsic) factors were also ranked high with regard to motivation: good benefits and wages, good working conditions, and getting along with others.

Given the fact that the three groups studied differed significantly on only one ranking item (being an integral part of a team), it can be stated that athletic trainers are fairly consistent regarding what motivates them to perform on the job. However, there are some differences with regard to the importance (rating) of individual motive statements. It appears that high school athletic trainers did not consider (rate) "being an integral part of a work team" as important as did the university and clinical groups. In addition, the high school and clinic athletic trainers rated good benefits and wages higher as a motivator than did the university group. In contrast, receiving a raise was not identified by any of the groups as an important motivator.

These results are consistent with the study by Edginton, Neal, and Edginton (3) of park and recreation specialists in Australia, Canada, Hong Kong, and the U.S., using the Neal/Priest Motivation instrument. They found that park, recreation, and leisure service workers were motivated by "doing important/worthwhile work," "job growth," and "doing interesting work" (3). The main difference with their studies and this study is that "good benefits and wages" is ranked and rated higher as a motivator of athletic training personnel. Only the Hong Kong sample of recreation and leisure service employees ranked good benefits and wages as a motivator (number one). One could conclude that the cost of living in Hawaii is a significant factor in influencing an athletic trainer to consider wages and benefits as a key motivator of work performance. In any case, additional research should be conducted to determine if wages and benefits are important to other mainland samples.

It becomes apparent from the data that athletic trainers in this population are motivated by the perceived importance of their work. They also are interested in job growth. Caution should be employed when considering how to create "job growth" for athletic trainers. From a management point of view, this does not mean additional work requirements. Conversely, job

growth means increasing responsibilities, scope, and challenges of the work.

Differences in motivational factors by the athletic training groups could be influenced by the organizational structure in which athletic trainers must operate. The primary differences may be a result of some athletic trainers being supervised by athletic directors or administrators. The mission of the organization may play an important role in describing these differences by sector (public and private). Further research needs to be conducted that investigates the work setting, organizational structure, and mission of these sectors to better understand the motivational issues and factors. This type of research would lend itself to discussions among educators, athletic trainers, and administrators for the design of jobs and work environments that facilitate excellence in service.

In summarizing the findings of this study, it appears that hygiene (extrinsic) needs, when satisfied, tend to eliminate dissatisfaction and work restriction but do little to motivate an individual to superior performance or to increase his/her capacity. On the other hand, satisfaction of the motivators will permit an athletic trainer to grow and develop in a mature way, often implementing and increasing his/her ability and decreasing factors that may lead to "burnout." Therefore, administrators and athletic directors should be encouraged to design work environments that satisfy the motivators as identified above. In this era of fiscal restraint, it is essential that administrators and managers gain new insights into motivation. If administrators and athletic directors are not willing to change a job situation to make it more motivating, three conditions may result: 1) employees will not be motivated, 2) the job might have to be eliminated, or 3) the management will have a morale problem. Therefore, it would be advantageous for administrators to assess the motivational influences of their employees.

The educational preparation of athletic trainers needs to include aspects of management (12). However, the notion of educating for business management may be counterproductive to the development of a motivated and energized work team. Business programs stress goal-setting policies, procedures, and control of people and materials for productivity (9). Future athletic training programs must incorporate concepts of leadership and leadership develop-

ment that facilitate students to be sensitive to the needs of others, be versatile, be patient with programs and people, and have a vision. In essence, managers relate to people according to the role they play in a sequence of events or in a decision-making process, while leaders are concerned with ideas and relate in more intuitive and empathetic ways (21). Finally, further research needs to be conducted in the area of motivation of athletic trainers. It should include a large mainland population, as well as athletic trainers in professional sports and the industrial setting.

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