

The Motivation of Kenya's Rift Valley Extension Agents

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Motivation - the psychological process that gives purpose, direction, and intensity to behavior - is mainly responsible for differential work output and is the most important determinant of effective job performance (Kreitner, 1989; Lawler III, 1973). It changes as time and conditions change, depends on incentives that the staff value and believe to be attainable with increased individual performance, and is high when staff frustration is minimal (Beder, 1990; Cohen, 1990; Watanabe, 1991).

According to Maslow (1943), people are motivated by five categories of needs. Starting from lowest level and first to be satisfied, these needs are physiological or survival needs, safety needs, social or love needs, self-esteem or ego needs, and self-actualization needs. Higher-level needs emerge after lower-level needs are satisfied and although a person can have several needs at once, only one need can dominate at any one time. A satisfied need loses its motivational appeal but if threatened, it regains its potency and remains dominant until it is satisfied. Maslow indicated that a fulfilled need does not motivate but research has shown that satisfying self-actualization needs increase motivation (Glassman, 1978; Heneman et al., 1980; Davies et al., 1990).

Unlike Maslow, Herzberg (1972) stressed the need for a favorable work environment saying that enriched jobs rather than pay, supervision, and other environmental factors were the key to motivation and job satisfaction. Herzberg believed that challenging, enriched jobs motivate employees more than dull, routine jobs. He advised managers to redesign jobs to provide opportunities for individual achievement, recognition, responsibility, advancement and personal growth. Researchers have shown that professional employees have different work preferences for which Herzberg did not account (Buford & Bedeian, 1988; Kreitner, 1989). For example, highly educated and more experienced workers are more likely to choose the public sector, offsetting lower wages with rewards

arising from the characteristics of their jobs. These motivational, job characteristics include autonomy, task identity, and perceived task significance (Perry & Wise, 1990).

An individual directs personal behavior toward pleasurable and away from undesirable outcomes (Vroom, 1964). In Vroom's view, motivation was determined by perceived probabilities of success, and increases as a person's perceived effort-performance and performance-reward probability increases. If employees believe their actions would lead to valuable, attainable rewards, they will work harder. To be effective, rewards must be linked to performance, goals must be reasonable, and the outcomes must be negotiated. Managers should identify, support and reinforce individual perception by linking appraisal to professional and personal development.

Adams and Rosenbaum (1962) indicated that treating employees inequitably lowers their motivation and performance. They advised managers to make inputs required for outcomes as explicit as possible.

Behaviors resulting in desirable consequences are likely to recur while those that result in undesirable consequences are less likely to recur (Skinner, 1969). Skinner indicated that what an organization appears to reward is the behavior that will be seen as the model for success. He advised managers to state which behaviors will be rewarded and which ones will not, and to tie rewards to individual performance. Other researchers (Kreitner, 1989; Winslow, 1990) have indicated that Skinner overemphasized the importance of external outcomes such as pay and promotion, ignored the role of internal outcomes such as feelings of accomplishment and recognition, and failed to consider the importance of individual needs, expectations and values.

Modern management practices are shifting

manager's emphasis from control to concern for staff creativity, interests and welfare (Steiner, 1973; Watanabe, 1991) and as times and conditions change, past motivational strategies become ineffective (Buford & Bedeian, 1988). It is harder for extension to fulfill its responsibilities without adequate staff incentives (Moris, 1987). Among the incentives affecting extension workers in Africa, and Kenya's agents in particular, are housing, transportation, pay, health insurance, and subsistence allowances while on official duty. Other incentive problems include supervisors who, although well trained in the basic sciences, often lack personnel management skills needed to motivate their staff. The importance of these incentives have also been identified by the researchers who are familiar with Kenya's Extension Service. One of the researchers had nearly 18 years of experience as an administrator, staff trainer and extension supervisor in Kenya's Extension Service.

Employees work harder and perform better if motivated and satisfied with their jobs (Beder, 1990; Watanabe, 1991). Extension managers should know what motivates their staff to prevent motivational problems and employee's frustration (Grossnickle & Thiel, 1988). Current information regarding the job satisfaction and motivation of extension agents in Kenya has not been available. This study was designed to provide information on factors related to job satisfaction and motivation of extension personnel in Kenya's Rift Valley Province.

The study was important because reliable information is necessary for good decision making and accountability (Altschuld & Thomas, 1991); and it was in Kenya's public interest to promote agricultural production through extension (Kenya Government, 1986 & 1990). Hence the need for a current study of staff motivation.

Purpose and Objectives

The purpose of this study was to identify job satisfaction factors related to motivation. Specifically, it sought to:

Identify the agents' personal characteristics.

Identify underlying factors of job satisfaction and their relative importance.

Determine the agents' motivational level.

Examine relationships between the personal characteristics, job satisfaction, and job motivation.

Procedures

The study was limited to factors identified by the researchers. Because only extension agents who were currently working in Kenya's Rift Valley Province participated in the study, generalizations were confined to that group. The researchers assumed positive motivation to be the reason agents desire to excel in their work. They further assumed that the agents understood the questions and responded frankly, realized how important their contributions were in helping extension managers develop effective staff motivational programs, and were willing to share their personal feelings.

In this descriptive, correlational research, a one-shot case study design (Campbell & Stanley, 1963) was chosen to collect data using a group-administered, closed-ended questionnaire with 105 job satisfaction, 10 motivational, and 10 biographic items. Each item in section one and two had a five-point Likert-type scale as follows: 1=Strongly Disagree, 2=Disagree, 3=Uncertain, 4=Agree, and 5=Strongly Agree. Job satisfaction factors and agents' personal characteristics formed independent and extraneous variables respectively. Motivation was the dependent variable. The questionnaire was found to have content validity by a panel of 11 professionals knowledgeable of extension systems throughout the world. Two of the panel members had worked for approximately ten years with Kenya's Extension Service. It had an eleventh-grade reading level and a reliability of .79 and .81 for section one (job satisfaction) and two (job motivation) respectively. Since a commonly used threshold for acceptable reliability is .70 (Hair et al., 1992), the questionnaire was considered reliable. The agents were also asked, in each district as a group, five open-ended questions as follows: (1) Were the questions clear? (2) Was the English understandable? (3) Did the questions cover things that interest extension staff? (4) Are there things that ought to have been covered that were omitted? (5) Would you say that extension staff are highly motivated, motivated or not motivated? Of the 2,087 agents who formed the frame, and accessible population, a random sample

of 325 agents, stratified by rank (i.e., agricultural assistants, assistant agricultural officers and agricultural officers) and gender, completed the questionnaire; about 85 percent of them as scheduled. A follow-up of the remaining 15 percent raised the response rate to 100 percent. Data were collected in winter 1993 and analyzed using the SPSS statistical package with alpha set at .05 level. Exploratory factor analysis was used to identify job satisfaction factors related to motivation.

Findings

The findings are related to the objectives of the study. Objective one sought to identify the agents' personal characteristics: gender, age, marital status, formal education and years of service. Nearly one in four agents was a female. The agents' mean age was 34.6 years. The youngest and oldest agent were 24 and 55 years, respectively. About 85 percent of the agents were married, 14.5 percent had never married and the remainder were either divorced or widowed. The agents' lowest qualification was a post-secondary agricultural certificate while the highest was a master's degree. On the average, agricultural assistants had worked longest (10.5 years) followed by assistant agricultural officers (8.5 years) and agricultural officers (5.2 years). The agents' total years in service ranged from 1 to 33. Nearly 87 percent of the agents had worked from one to 15 years while all agricultural officers had 10 years or less of service. Agricultural assistants had worked longest in their current positions (5.5 years). Agents in the other two ranks had, on the average, served for the same length of time (3.9 years) in their current positions. About 41 percent of the agents had not received any promotion, 50.9 percent had been promoted once, 6.5 percent twice, 1.0 percent three times and 0.3 percent four times.

Objective two sought to identify the underlying factors of job satisfaction and their relative importance. To determine the underlying dimension of this complex phenomena, factor analysis was used (Table 1) as recommended by Ford et al. (1986), Norusis (1990), and Hair et al. (1992). A maximum likelihood factor analysis was conducted since the researchers assumed that the variance of each measured variable could be

decomposed into common and unique portions. This approach was considered appropriate because the measured variances were assumed to be a linear function of the measured variables (Ford et al., 1986). The maximum likelihood factor analysis method was also deemed appropriate since the analysis was done using a sample rather than a population (Norusis, 1990). Hair et al. (1992) indicated that factor analysis needed at least a sample of 50 but preferably 100 observations. They recommended four to five observations per variable but pointed out that in many instances, researchers are forced to factor-analyze a set of variables when only a 2 to 1 ratio of observations to variables is available. This exploratory study used approximately three subjects per item. The number of factors to extract before the unique variance begins to dominate common variance was based on a combination of the Latent Root Criterion (eigen value >1) and the Scree Test Criterion (Hair et al., 1992). Using this procedure, eight factors were extracted. Since the factors were not assumed to be orthogonal with one another, the Oblimin rotation with maximum likelihood was used for extraction and to arrive at the factor matrix loadings. Table 1 indicates the items with their factor loadings. Ford et al. (1986) indicated that only variables with loadings greater than .40 should be considered in defining a factor. In this study, only variables with factor loadings of .40 or higher were reported (Table 1). Factor names and the percent of variance each factor explained were as follows: evaluation (7.4%), dependable supervisors (5.3%), work incentives (2.8%), pay (2.2%), praise and work location (1.8%), housing and transportation (1.6%), job security (1.5%) and administration and supervision (1.3%). The factors were named by a panel of nine experts. Table 2 presents the interfactor correlations for the obliquely rotated factors. The data support the assumption that the researchers made earlier in the paper that the factors were not orthogonal.

Objective three sought to determine the agents' motivational level. Table 3 presents the mean and standard deviation of each variable used to measure motivation. The overall agents' mean motivational-level score was 3.66 on a scale of 1 to

Table 1. Rotated Factor Matrix Loadings Order of 35 Job Satisfaction Items on Oblique Factors and the Means and Standard Deviations for the Items (n=325)

Item	Abbreviated Variable Label ^a	Factor Loading	Mean	SD
Factor 1=Evaluation				
60	Being recognized for good work increases my motivation	.50	4.18	.82
87	Evaluation of my work motivates me to work harder	.50	4.14	.77
33	Feedback from my supervisor increases my motivation	.49	4.21	.78
45	Positive recognition makes me proud to be an agent	.47	4.42	.82
92	I enjoy meeting my supervisor to discuss my work	.46	3.74	1.05
61	Effective supervisors praise agents for good performance	.41	3.52	1.14
20	My supervisor's feedback gives me confidence in my job	.41	4.35	.77
116	Praise for good performance increases my desire to excel	.41	4.09	.89
Factor 2=Dependable Supervisors				
43	My supervisor tends to concentrate more on my mistakes	.64	3.20	1.30
28	I get more negative input than help from my supervisor	.64	3.63	1.31
15	I frequently receive positive recognition for good work	.50	2.87	1.32
30	In extension most hardworking agents go unrewarded	.49	1.81	1.14
57	I am satisfied with most of the current extension policies	.49	2.56	1.14
97	My supervisor makes my work more pleasant	.44	3.33	1.10
16	I have a chance to do things for which I am most qualified	.42	3.28	1.39
Factor 3=Work Incentives				
88	I work hard mainly to avoid being disciplined	-.46	2.10	1.02
37	Evaluating me on work objectives would lower my motivation	.44	3.83	1.01
Factor 4=Pay				
24	I am more motivated by pay than by the work I do	-.57	3.92	1.17
84	Higher pay is more important to me than job security	-.54	3.94	.96
58	In extension, pay is the most important thing to me	.45	2.15	1.02
Factor 5=Praise and Work Location				
46	Praise has little influence on my work performance	.50	3.72	1.10
36	I deserve little positive recognition for doing my job well	.47	4.06	1.16
32	I prefer working far away from my home area	.47	3.79	1.20
59	I should be praised less frequently for doing my job well	.44	3.39	1.11
52	Being praised makes me feel flattered	.44	3.69	1.00
Factor 6=Housing and Transportation				
80	Good housing increases my motivation to work	.76	4.11	.85
82	Housing has little influence on my job satisfaction	.68	3.96	.93
51	Good housing contributes to favorable work environment	.60	4.42	.74
6	Good housing contributes to my job satisfaction	.60	4.26	.94
76	Inadequate transport reduces my job effectiveness	.45	4.15	1.05
99	Adequate transport gives me job satisfaction	.42	4.38	.79
Factor 7=Job Security				
22	I prefer a secure job that pays less than an insecure one that pays more	-.55	3.62	1.39
26	Feeling secure on the job motivates me to work harder	-.41	4.38	.82
Factor 8=Administration and Supervision				
100	Extension administration has little influence on my work performance	.47	3.83	1.00
96	Supervision from my boss has little effect on how I work	.41	3.55	1.08

^aNegative items 24, 28, 30, 32, 36, 37, 43, 46, 52, 59, 82, 84, 96, and 100 were recoded (1=the lowest and 5 the highest level of job satisfaction). The items were rated on a scale of 1 to 5 where 1=Strongly Disagree, 2=Disagree, 3= Undecided, 4= Agree, 5=Strongly Agree.

Table 2. Interfactor Correlations for the Oblique Rotated Factors Underlying Job Satisfaction of the Extension Agents in Kenya's Rift Valley Province (n=325)

Factors	1	2	3	4	5	6	7	8
Evaluation (1)	1.00							
Dependable supervisors (2)	.13	1.00						
Work incentives (3)	.10	.12	1.00					
Pay (4)	-.01	-.18	-.23	1.00				
Praise and work location (5)	.08	-.08	.08	.03	1.00			
Housing and transportation (6)	.29	-.07	.09	.06	.16	1.00		
Job security (7)	-.19	-.03	-.02	-.02	-.04	-.16	1.00	
Administration and supervision(8)	.05	-.02	.09	.07	.08	-.20	-.004	1.00

Table 3. Agents' Job Motivation Variables and Mean Motivational Level (n=325)

Item	Variable Label ^a	Mean	SD
9	I often think of leaving the extension service	3.76	1.27
38	Working as an extension agent is in itself rewarding	3.79	1.07
42	I am highly motivated as an agent	3.27	1.38
64	I love my job	4.33	.74
102	My job is frustrating	3.91	1.14
105	I wish I had chosen a different career	4.04	1.03
109	The hours I spend on the job are the ones I enjoy most	3.67	1.03
113	If I were to choose a career once more, I would choose to be an extension agent	3.80	1.08
114	While on vacation, I often wish I were back to work	2.90	1.16
115	In the extension service, I have many opportunities for personal growth	3.15	.27

^aNegative items 9, 102, and 105 were recoded before calculating the variable means and standard deviations (1 represented the lowest and 5 the highest level of motivation).

Mean=3.66

SD=.72

Min=1.4

Max=5.0

5 (1=lowest and 5=highest). Within the agents' ranks, the motivational level was 3.80 for agricultural assistants, 3.43 for assistant agricultural officers, and 3.40 for agricultural officers. An analysis of variance indicated that the differences in the motivational level of these three groups were statistically significant. The Tukey's HSD post hoc test was applied to determine which groups were different. The results indicated that agricultural assistants were significantly different in their motivational level from assistant agricultural officers and agricultural officers but assistant agricultural officers were not significantly different from agricultural officers. An F-test revealed that the motivational level of males (3.66) was not significantly different from that of females (3.67).

In group interviews, the agents were asked whether they were highly motivated, motivated, or

not motivated. The agents, in 11 districts said they were not motivated while in one district they said they were motivated. In the district in which the agents described themselves as motivated, the district agricultural officer had received superior ratings as a staff motivator from his supervisor. The officer had also won the agents' trust and the praise and admiration of superiors. This particular finding further confirmed that having dependable supervisors (i.e. persons worthy of being trusted to provide motivational and work related support) was the most important factor related to the agents' motivation.

Most agents believed their promotions were more related to years of service than to individual performance. In recruiting staff for training, agents reported that merit was being overlooked or not seriously considered. Although other factors such as agent's past academic record, work

performance, years since graduation, and home district were used in selecting an agent for further training, agents suggested that merit ought to be the most important criterion in the selection process. Other things that were important for the agents' motivation included allowances and health insurance. Some agents felt that technical staff, irrespective of rank, should receive equal per diem for travel and hotel accommodation. Per diem in Kenya for officers on duty is based on rank. It was difficult for low-ranking agents to stay in the same hotels due to reimbursement problems. However, other agents felt that per diem based on rank help attract low-ranking agents to move up through the ranks. This view tended to be held by high-ranking agents while low-ranking agents tended to hold the opposing view.

Objective four sought to examine the relationships between independent variables and the dependent variable. An examination of intercorrelations among extraneous variables revealed a very strong association between the agents' age and total years in service ($r=.90$), and between the agents' rank and formal education ($r=.95$). The presence of highly correlated independent variables, indicated that one variable can be explained or predicted by the other. This multicollinearity limits the size of R^2 or incorrectly estimates the regression coefficients (Hair et al., 1992). To control the undesirable effects of multicollinearity, the variable less strongly correlated with motivation in each pair was dropped from further analysis. Age was dropped in favor of total years in service and formal education was dropped in favor of the agents' rank on the job.

Categorical variables: gender, marital status, rank and highest qualification were dummy coded before entering them into the regression equation. When the stepwise procedure was used to regress motivation on personal characteristics, only agents' rank and years of service were statistically significant ($p < .05$). The procedure, repeated using the job satisfaction-factor scores plus agents' rank and years of service, indicated that only rank and five of the eight factors were statistically significant ($p < .05$).

Following McCracken's (1991) recommendation for controlling the effects of extraneous variables, the researcher entered the

agents' rank on the job into a hierarchical regression equation first to determine the amount of unique variance it contributed. It accounted for about 7 percent of the variance in motivation. The job satisfaction factors which were statistically significant in the stepwise regression equations were then entered in a hierarchical regression equation (Table 4) in order of their importance.

With all the factor scores in the equation, the final R^2 was .55 whereas the adjusted R^2 was .54 indicating that the job satisfaction factors contributed an additional 48 percent of the variance in motivation after accounting for the variance contributed by the agents' rank. Final t-test values indicated that rank was not statistically significant ($p < .05$). When motivation was regressed on the five job satisfaction factors in a stepwise regression equation omitting rank, an R^2 of .54 and an adjusted R^2 of .53 were obtained.

Conclusions

The researchers' conclusions are related to the objectives of the study and are generalizable to extension agents in Kenya's Rift Valley Province. They are as follows:

Personal characteristics were not as important for the agents' motivation as were the job satisfaction factors.

Eight factors were important for the agents' job satisfaction. In decreasing order of their importance, these factors were evaluation, dependable supervisors, work incentives, pay, praise and work location, housing and transportation, job security, and administration and supervision.

Only five of the eight factors were important in explaining the agents' motivation. In decreasing order of their importance, these factors were dependable supervisors, pay, job security, evaluation, and administration and supervision.

One cause of staff frustration and low motivation was their perception that merit was often ignored in selecting agents for further training.

On the basis of this study, the agents' motivational level was above the midpoint (2.50),

on the positive side of the scale.

Table 4. Regression of Agents' Motivation on Agents' Rank and Selected Job Satisfaction Factor Scores -- Hierarchical Entry (n=325)

Factors	R ²	R ² Ch	b	t	p
Rank: Dummy 3	.068	.068	.48	.38	.7025
Dummy 4	.068	.000	-1.34	-1.07	.2876
Dependable supervisors	.352	.284	3.46	10.96	.0000
Pay	.449	.097	-2.55	-7.86	.0000
Job Security	.510	.061	-1.77	-5.20	.0000
Staff Evaluation	.539	.029	1.51	4.68	.0000
Administration and supervision	.554	.015	-1.18	-3.19	.0016
Constant			36.67		

Note: Standard error = 4.897, Adjusted R² = .554, Model F = 52.96 p<.000.

Over 50 percent of the variance in the motivation of extension agents in Kenya's Rift Valley Province can be explained by five job satisfaction factors.

Job satisfaction and motivation are related but different. This conclusion was based on the fact that eight factors were important for their motivation.

The findings may be useful to extension managers in other areas where agents have similar basic training and terms of service.

Implications

Extension managers could do a better job of improving staff motivation by giving less attention to personal characteristics, and more attention to the job satisfaction factors identified in this study. For agents in Kenya's Rift Valley Province, having dependable supervisors was the most important factor related to their motivation. Selecting individuals with desirable leadership qualities such as good interpersonal communication skills and training them as extension supervisors is a very important step in improving staff motivation, and by implication (Davies et al., 1990; Kreitner, 1989; Lawler III, 1973; Grossnickle & Thiel, 1988; Perry & Wise, 1990), performance and productivity. Staff motivation can also be increased by tying agents' pay to performance, providing job security, evaluating agents objectively and showing concern for not only staff productivity but also for their welfare. This study has shown that motivation is positively related to job satisfaction. Raising agents' motivation should help increase their job satisfaction.

The study supports Herzberg's (1972) findings regarding the importance of good relations with one's supervisor, administrative support, effective supervision, good pay and job security. It fails to support his view that the job factors cannot satisfy employees. Eight factors contributed 24 percent of the variance in job satisfaction.

The findings support Vroom's (1964) recommendation that staff performance be assessed accurately; based on standards that employees perceive to be fair, achievable, and equal for all. The entire incentive system must get administrative backing and attention; and employees should be treated equally. The study supports Skinner's (1969) conclusion that identical rewards for all employees are ineffective motivators. To motivate, rewards must be based on individual performance.

Dependable supervisors should help develop a good interpersonal relationship between the supervisor and the agent. Supervision in extension is the process of giving the agents instruction, guidance and discipline which they require to fulfill their duties and responsibilities. For its success, this process requires mutual trust. Whether, in the agent's view, a supervisor is reliable or not depends on how the supervisor and the agent interact with each other. Effective supervision depends on how the supervisor, the agent and the extension organization interact with one another.

Recommendations

Extension managers in Kenya's Rift Valley Province can use the findings of this study to

improve staff motivation. The researchers recommend the following:

Extension managers should attend to agents' concerns for selecting staff for training, evaluating staff for promotion, giving allowances, and health insurance.

Extension managers should improve the quality of Extension supervisors. Applicants for the positions of extension supervisors should be evaluated thoroughly to ensure that they are suitable. Those selected should be trained regularly to give them personnel management skills. Supervisors should be qualified and competent to be respected by their peers and subordinates.

Extension managers should tie pay to performance, provide job security, evaluate staff objectively, and be supportive and sensitive to staff welfare.

The study should be replicated in other provinces to compare the results.

More studies should be done in Rift Valley Province to identify factors that account for the unexplained variance in motivation and job satisfaction.

Future studies should include at least five items per factor under investigation to further refine and develop the data related to motivation and job satisfaction.

Studies should be done to determine the impact of inset-vice training and payment of agents' allowances and benefits on their motivation.

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