Published in final edited form as:

J Nutr Educ Behav. 2010 ; 42(5): 337–344. doi:10.1016/j.jneb.2009.08.008.

Job Satisfaction and Retention of Community Nutrition Educators: The Importance of Perceived Value of the Program, Consultative Supervision and Work Relationships

Katherine L. Dickin, PhD, Jamie S. Dollahite, PhD, RD, and Jean-Pierre Habicht, PhD, MD
Division of Nutritional Sciences, Cornell University, Ithaca NY 14853

Globally, there is a resurgence of interest in community health workers and their potential for implementing public health and nutrition programs (1,2). Use of paraprofessional, lay, or peer educators is a strategy for reaching underserved populations and delivering health promotion and preventive services, particularly when educators are recruited from the communities they serve, enhancing credibility and rapport with their audience (1,3,4). At the same time, the paraprofessional model of outreach involves challenges. Workers with less formal education require considerable in-service training, mentoring, and support, and close supervision may not be feasible when educators work independently in dispersed field settings.

While supportive management and motivated staff are generally recognized as important, little is known about how specific aspects of program work context influence paraprofessional community educators' work attitudes (5). Job satisfaction is a key indicator of the degree to which workers' expectations have been met relative to the demands of the job. Intention to leave is a measure of behavioral intentions about staying or leaving a position, conceptualized as consequent to job dissatisfaction (6,7). Paraprofessional nutrition educators' job satisfaction and intentions to leave are critical for program effectiveness because they are linked to motivation, performance, and worker retention. Motivation involves the expectations and goals that energize, channel, and sustain behavior (8) and performance may be motivated by rewards that are intrinsic to the task, such as enjoyment, growth and accomplishment, and by extrinsic rewards, such as pay and benefits (9). Retention of staff is essential for keeping training costs in check and for maintaining program stability and output (2). To improve the effectiveness of community nutrition programs, research is needed on management strategies to support quality performance, morale, and retention of community nutrition educators (2,10).

We examined these issues in the Expanded Food and Nutrition Education Program (EFNEP) (11), a national program with decades of success in delivering nutrition education to low-income families through paraprofessional educators, i.e. community nutrition educators (CNEs) indigenous to the communities served. Practical, hands-on sessions cover diet quality, food resource management, and food safety and are designed to promote behavior change and bolster self-confidence among participants. CNEs not only teach but also recruit, support, and enable low-income families to develop skills and improve family nutrition. Professional extension educators (EEs) manage the program, train, and supervise the front-line CNEs.

Corresponding author: Katherine L. Dickin, PhD, Division of Nutritional Sciences, Cornell University, Ithaca NY 14853, Tel: 607-255-7297, Fax: 607-255-0027, kld12@cornell.edu.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

This research examined work context from the perspective of EFNEP CNEs in New York (NY). Perceived work context, or CNEs' experience of the environment in which they work, is a multi-dimensional construct we developed based on interviews with EFNEP staff exploring the factors that they said influenced their performance and program impact: aspects of management, supervision, team, organization, and program design (12). We explored how work context contributed to CNEs' satisfaction and enthusiasm in their work roles, attitudes expected to influence their interactions with program participants and, ultimately, the impact of the program. The analyses reported here focus on CNE job satisfaction and intention to leave, as shown in the simplified conceptual framework in Figure 1. Research examining the hypothesized links between perceived work context and program outcomes are described elsewhere (13).

Methods

Study Sample and Data Collection

Surveys of CNEs and EEs were conducted in all 32 NY sites where EFNEP was active in 2001. All staff in their positions for at least 2 months were eligible. The protocol was approved by the Cornell University Institutional Review Board and informed consent obtained. Self-report surveys were administered in person for all but 6 sites, and by mail for the rest. Questionnaires for CNEs and EEs were developed separately and pre-tested to assess the variables in Figure 1.

Measures

Perceived work context variables—CNEs' perceptions of their work context were assessed using multi-item scales adapted from other research or developed using CNEs' words and views expressed in in-depth interviews. Factor analysis followed by orthogonal rotation was used to assess covariance and refine the scales. Scales for each variable included 3 to 14 items scored on a 5-point scale, and Cronbach's α coefficients ranged from 0.66 to 0.92 (13).

Yukl's Managerial Practices Survey (MPS) was adapted to assess CNE perceptions of the frequency with which their manager engaged in 12 managerial practices (14). Another 3-item scale was created to assess CNEs' sense that they could express opinions to their supervisors, an important theme that emerged in interviews. This scale was highly collinear with consulting, the MPS scale assessing worker perceptions of how often their supervisor sought their input before making decisions. Because these variables measured two related aspects of supervisors' tendency to listen to CNEs' voices, a composite variable, *voice*, was created from their mean.

Multi-item scales were created, using quotes from CNE interviews (12), to measure other aspects of work context they reported to be most salient to their work attitudes. A scale assessing perceived *value* of the program asked about benefits of EFNEP for participants (13). The *supervisory relationship* scale measured CNEs' perceptions of interactions with their direct supervisor—being trusted, respected, and receiving adequate time and attention. Another scale assessed aspects of team relationships described as important: support, friendship and assistance provided by other CNEs. Office relationships assessed whether CNEs felt respected, included, and informed in Extension organizations where they worked. *Work relationships* was created as a composite from the mean of team and office relationships to avoid problems of collinearity. *Pressure for numbers* measured the extent CNEs' felt pushed to recruit and graduate large numbers of participants and *perceived workload* assessed the degree to which CNEs experienced difficulty in completing all the work expected of them.

Background characteristics of CNEs, supervisors and programs—Independent variables included CNE and supervisor demographic characteristics and work roles (e.g. time

on EFNEP, pay level, hours/wk), and CNE personality traits relevant to CNE work roles (15). Program characteristics including size (total resources, number of CNEs, caseload), group vs. individual instruction, and urban vs. rural were abstracted from the EFNEP Evaluation and Reporting System (16). A supervisory structure scale assessed whether CNEs' direct supervisor was the EE or an intermediate supervisor, such as a CNE with more training or experience.

Job satisfaction—Job satisfaction was measured both in general (2 items, $\alpha = 0.62$) (17) and in relation to specific aspects of the job. The five specific satisfaction factors adapted from the Minnesota Satisfaction Questionnaire (18) were satisfaction with: intrinsic rewards of the job such as doing new things, and seeing results (5 items, $\alpha = 0.75$); pay (2 items, $\alpha = 0.89$); extrinsic motivators other than pay (i.e. employee benefits such as health insurance) (3 items, $\alpha = 0.59$); supervisors (3 items, $\alpha = 0.85$); and co-workers (2 items, $\alpha = 0.75$). The specific facets of job satisfaction were modeled as predictors of intention to leave. Overall job satisfaction ($\alpha = 0.83$) was a composite variable created from the mean of general satisfaction and the five specific factors. This comprehensive measure of satisfaction was modeled as a dependent variable and as a mediator of the influence of work context and background variables on intention to leave. All satisfaction variables were scored on 100 point scales for ease of comparison, with scores of 80 and above considered to indicate positive work attitudes.

Intention to leave—Intention to leave was measured with 4 items (6), summed and converted to a 100 point scale. Items asked about wanting to quit if it were possible, planning to leave, searching for a new job, and frequency of thoughts about leaving. Higher scores indicate stronger intentions to leave, with scores ≤ 40 considered positive, i.e. little intention to leave. Internal reliability was 0.71. Intention to leave was modeled as a dependent variable.

Data Analysis

Data were analyzed using Stata 7.0 (StataCorp). After refining the scales (13), descriptive, bivariate (Pearson's correlations) and multivariate (regression) analyses were run. We differentiate between bivariate and multivariate analyses because the latter's statistical parameters take into account contributions of other variables in the regression equation, while bivariate parameters do not. Effects with $p < 0.05$ were considered statistically significant.

The dataset was multi-level with measures at individual (e.g. CNE) and site (e.g. supervisory and program characteristics) levels; CNE work attitudes were expected to reflect variation both between and within sites. Preliminary analysis using a random effects model estimated the standard deviation for between-site variation in dependent variables to be zero so we dropped the site-level random factor from models.

Multivariate models of overall satisfaction and intention to leave were based on the conceptual framework (Figure 1) and tested using forward stepwise linear regression analysis. Standardized beta coefficients were estimated to allow direct comparison of the amount of variation in the dependent variables explained by each independent variable, controlling for all other variables in the model. In Model 1, job satisfaction was first modeled as a function of work context variables, beginning with managerial practices and then adding other work context variables. *Supervisory relationship* was tested separately from managerial practices, due to collinearity. Variables significantly associated with job satisfaction ($p < 0.10$) were retained. Next, groups of variables representing more distal influences (program, supervisor, and CNE characteristics) were added to the model, retaining all significant variables. Similarly in Model 2, intention to leave was modeled first as a function of work context before distal variables were added. This model also included the facets of satisfaction as expected predictors of intention to leave (since Model 2 did not include overall satisfaction as an outcome or a predictor).

Model 3 tested whether overall job satisfaction mediated the relationship of work context and background variables with intention to leave. After retaining the independent variables associated with intention to leave in Model 2 (excluding specific satisfaction facets), we added overall satisfaction to assess its impact on the associations of work context and intention to leave.

All models were examined using regression diagnostic tests. When variables were collinear, composite variables were created (in the case of conceptually-similar variables) or the more proximal variable (see Figure 1) was included in the model. Interaction terms were tested for all potential effect modifiers and examined in detail when $p < 0.10$.

Results

Characteristics of staff and sites

Statewide, 115 (95% of eligible) CNEs participated and had complete data. Most were female (93%), had at least one year of post-secondary education (80%), and worked full-time (81%). CNEs were 22 to 67 years old, had been in their jobs for 2 months to 33 years, and most were white (68%), black (14%), and/or Hispanic (19%). EEs were similar to CNEs in age, gender, and tenure in job, but most had graduate degrees. In 85% of sites, the EE was the primary supervisor. Programs varied widely in size with annual budgets of \$45,927–1,644,881; 2–17 CNEs/site; and caseloads of 30–1949 participants/yr.

Job attitudes

CNEs were generally satisfied with and not actively seeking to leave their jobs (Table 1). They were satisfied with most specific facets of their jobs except pay. Less than 20% expressed an intention to leave (i.e. score ≥ 60).

Perceived work context

CNE perceptions of their managers' practices were very positive, ranging from about 4 to 4.4 points out of 5 and variability was similar across most practices (Table 2). Among perceived work context variables, the highest mean score and lowest variability were reported for perceived *value* of the program. *Supervisory* and *work relationships* had similar high scores. Scores were lower and more variable for *pressure for numbers* and *perceived workload*, the two negative aspects of work context.

Bivariate analysis

All specific facets of satisfaction were correlated with general satisfaction and with one another, except that satisfaction with pay was correlated only with intrinsic rewards and extrinsic rewards other than pay. All specific facets except satisfaction with coworkers and supervisor were negatively correlated with intention to leave. Overall job satisfaction was negatively correlated with intention to leave ($r = -0.62$, $p < 0.001$).

Most perceived work context variables, including managerial practices, were positively correlated with overall satisfaction. Of the managerial practices, only *clarifying*, *consulting*, *inspiring*, and *mentoring* practices were significantly negatively correlated with intention to leave. Most other work context variables were negatively related to intention to leave (Table 2).

CNEs who were male, black or had post-secondary education reported lower, and older CNEs reported higher satisfaction ($p < 0.05$). These relationships were significant in the opposite direction for intention to leave. The personality traits openness, empathy, responsibility, work focus, adaptability, initiative, and optimism were positively related to satisfaction; openness

and work focus correlated negatively with intention to leave (data not shown). Among supervisor and site characteristics, only supervisory structure ($r = 0.27$) and urban site ($r = -0.26$) correlated with satisfaction ($p < 0.01$), and supervisory structure with intention to leave ($r = -0.28$, $p < 0.01$).

Multivariate analysis

Model 1, the main effects model predicting overall job satisfaction from perceived work context, program, supervisor, and CNE characteristics, accounted for about 60% of the variation in job satisfaction (Table 3). *Work relationships* and perceived *value* of the program were strong predictors. Among managerial practices, only *voice* was significant. Having an intermediate supervisor was associated with higher levels of satisfaction, as compared to being supervised directly by the EE. CNEs with no post-secondary education reported higher satisfaction than did those with more education. No other CNE, supervisor, or program characteristics were significant in the full model.

The only effect modification in Model 1 was the interaction of supervisory structure and CNE education (standardized beta = 0.459, $p = 0.057$). CNEs with any post-secondary education were more satisfied with an intermediate-level supervisor as their direct supervisor, whereas those without post-secondary education were more satisfied when supervised by the EE. This suggests how and to whom supervisory structure mattered, but inclusion did not improve the fit of Model 1 or change the relative magnitude of other coefficients.

The main effects Model 2 in Table 4 explains about 36% of the variation in intention to leave. The strongest predictor was *value* of the program. Of the specific facets of satisfaction, only satisfaction with pay was significant. Satisfaction with intrinsic rewards was highly collinear with *value* of the program and not included in the model. An intermediate supervisor and good *supervisory relationships* were negatively associated with intention to leave.

Satisfaction with pay was modified by CNE post-secondary education (standardized beta = -0.387, $p = 0.08$), such that highest and lowest levels of intention to leave were found among CNEs with post-secondary education, and in this subgroup high intention to leave was associated with low satisfaction with pay. *Value* of the program was still a stronger predictor than dissatisfaction with pay. Among those with no post-secondary education, satisfaction with pay was not related to intention to leave. Inclusion of the interaction term increased the adjusted R^2 by only 1% and did not appreciably affect the coefficients of *value* or supervisory variables.

Model 3 tested whether the associations of work context variables with intention to leave were mediated by overall job satisfaction. Overall satisfaction was added to a model of intention to leave that included the work context and background variables in Table 4, but not specific facets of satisfaction (components of overall satisfaction variable). *Supervisory relationships* and supervisory structure became non-significant, indicating mediation by job satisfaction. The standardized beta coefficient for *value* was reduced but remained significant ($p < 0.01$) showing that the relationship between *value* and intention to leave was partially mediated by job satisfaction but *value* also influenced intention to leave independently of satisfaction (Figure 2).

Discussion

Among EFNEP CNEs in NY, job satisfaction was high, intention to leave was low, and both were more related to CNE perceptions of work context than to background characteristics of CNEs, supervisors, and programs. Job satisfaction mediated the relationships between work context and intention to leave but notably, perceived *value* of the program had an independent direct effect on intention to leave.

These results confirm the importance of CNEs' perceptions of work context for job satisfaction and intention to leave (Figure 1). These relationships can best be understood by viewing these paraprofessional educators as having professional work attitudes and motivations. Professionals are defined by their specialized expertise and credentials, autonomy, and motivations related to altruism and meaningful work (19,20). Paraprofessionals have less formal training and often work in supporting roles. Yet CNEs in our study reported high job satisfaction related to intrinsic rewards, usually viewed as more typical of highly-educated professionals (21). Extrinsic rewards such as pay were less important than expected. Despite low satisfaction with pay, most CNEs intended to stay in their jobs because they felt they could make a difference to program participants, an indication of altruistic motivations. *Work relationships* and a *voice* in decisions were also very important. In contrast, recommendations for supporting the performance of community health and nutrition paraprofessionals often focus on training, monitoring, and extrinsic rewards, overlooking opportunities to shape work contexts to fit these workers' intrinsic motivations (22,23).

Perceived *value* of the program was a strong predictor of job satisfaction and surprisingly, the strongest predictor of intention to leave and the only work context variable that affected intention to leave independently of overall job satisfaction. The importance of *value* for satisfaction and intention to leave is consistent with findings of better program outcomes in EFNEP sites where CNEs highly value the program (13). In interviews, CNEs have spoken convincingly of their beliefs that EFNEP is valuable for participants and that this makes their own work worthwhile (12). While being able to help others has been linked to positive work attitudes among volunteers and peer educators in other health programs (24,25), this is the first study to quantify perceived *value* of the program and analyze its importance relative to other variables expected to influence the work attitudes of community health educators.

Most managerial practices were positively related to job satisfaction but the strongest relationships were for consulting, mentoring, inspiring, supporting and problem-solving, suggesting the relevance of participatory management practices often recommended for professionals (26). Supervisors of paraprofessionals tend to focus on planning, monitoring, and setting objectives but these were not as strongly correlated with satisfaction and intention to leave. Giving CNEs a *voice* in decision-making was the most important facet of management in multivariate analysis predicting job satisfaction. The relative rarity of consulting with CNEs may contribute to the strength of this relationship. Scores on *voice* were lower than most other work context variables so EEs may recognize CNEs' need for assistance, yet overlook their need to have a say in decisions. Authors of a study of burnout among CNEs recommended more participatory management but did not test its effectiveness (5) and questions have been raised as to whether these staff could be included in decision-making in a meaningful way (27). Our study demonstrates that this is not only possible, but could also promote more positive work attitudes.

The association of job satisfaction with positive *work relationships* confirms strong sentiments expressed in interviews (17). The team relationships scale measured instrumental and emotional support, because CNEs learn by shadowing more experienced educators and confide in co-workers about personal challenges. Relationships in the organization were also important. Given their paraprofessional status, staff can feel marginalized and steps may be needed to counteract these perceptions. *Supervisory relationships* characterized by adequate attention and mutual respect predicted low intention to leave, further evidence that even field staff working in dispersed community sites benefit from supportive interactions with colleagues and supervisors.

We were surprised that *pressure for numbers* of graduates was not significant in job satisfaction models despite strong opinions expressed in interviews. Survey responses indicated that this

was a substantial concern for some CNEs but negligible for others. Similar results were found for *perceived workload*. These two variables likely reflect how CNE performance is monitored and their influence may have been captured by other variables.

Higher education was related to lower job satisfaction, and to greater intention to leave among CNEs not satisfied with their pay. Job responsibilities in EFNEP NY vary across sites (12) and while high school graduation is the minimum qualification, almost 80% of the CNEs had additional formal education. This has implications for job expectations and increases the need to provide CNEs with opportunities for growth and responsibility that make jobs intrinsically rewarding (28). The interaction between satisfaction with pay and education demonstrated that among more highly educated CNEs (who presumably had more vocational opportunities), even those not satisfied with their pay still intended to stay in the job when they believed strongly in the *value* of the program. Background characteristics of CNEs other than educational level were not important predictors of satisfaction or intention to leave. Supervisory structure was the only significant background characteristic of programs or supervisors. Few sites had intermediate-level supervisors and these differed in several ways from other sites, making interpretation difficult, but the apparent preference of more educated CNEs for supervisors more similar to themselves deserves further research.

Our finding that work context factors such as *value*, managerial practices and *work relationships* were much stronger predictors of satisfaction and intention to leave than were personality and background characteristics highlights the influence of work context on all CNEs, regardless of individual traits. Characteristics of CNEs, supervisors and programs may influence satisfaction indirectly via perceptions of work context, but our results clearly indicate the merits of understanding which aspects of work context are most rewarding for these educators.

Our sample favored the inclusion of satisfied CNEs (i.e., those who remain in their positions are likely to be satisfied), which may have limited examination of the sources of dissatisfaction but was consistent with our interest in exploring the factors that influence the attitudes of current CNEs. The data are cross-sectional and relationships cannot be interpreted as causal. Longitudinal studies of CNE job satisfaction and intention to leave would be ideal but were not feasible in this study. Common method bias could inflate the correlations of perceived work context with dependent variables because all were measured by self-report. However, the relevance of *value* and other aspects of work context to these CNEs has been demonstrated in relation to an independent measure of program outcome (13) and confirmed in qualitative interviews (12). This research focused on one program and while it is obviously important to investigate these relationships in other public health programs, we would expect similarities across settings in the factors influencing front-line staff delivering health and nutrition programs.

Implications for Research and Practice

Recognition that paraprofessionals in public health and nutrition programs are likely to have motivations similar to professionals is a first step toward creating supportive work contexts. In addition to considerations such as training and remuneration, paraprofessional educators need feedback on the value of their contributions to the community, a say in shaping program activities, and positive work relationships. There is evidence that supervisors tend to underestimate workers' desire for participation in decisions and intrinsically-rewarding work, thereby missing opportunities to enrich or support these aspects of non-professional jobs (29). CNEs' strong belief that their work makes a difference in participants' lives is a huge asset for EFNEP and suggests that self-selection is advantageous in that CNEs who stay in their positions are likely to be those who are motivated to perform effectively.

Given hiring and training challenges, programs must maximize retention of effective staff. Chronic shortages in public health funding increase the importance of finding ways to shape and manage programs so that front-line jobs are rewarding for staff. Intention to leave was quite low in this sample and CNEs' tenure averaged over 7 years, indicating low turnover. Our results indicate that extrinsic rewards are not the most important influence on the morale and retention of such workers, as long as remuneration is fair relative to responsibilities, and that EFNEP in NY has created a work context that CNEs perceive as well-managed, supportive, and offering opportunities to do meaningful work. This suggests that intrinsic rewards may be significant motivators in other programs with similarly constrained budgets.

The finding that supervisory relationships predict intention to leave highlights the importance of supportive supervision for retention of CNEs and likely extends to all programs employing community educators. A review of public health programs found that while interventions promoting supportive supervision can improve educator motivation and development, supervision and support tend to be weak in large-scale programs (2). Managerial training on consultative supervisory styles could improve the work attitudes of front-line staff.

To achieve the hoped-for effectiveness and efficiency of employing paraprofessional community health and nutrition workers to reach under-served populations, strategies are needed to maximize workers' motivation, performance, and retention. High satisfaction and low intention to leave in this study were associated with many aspects of perceived work context, particularly positive work relationships, a voice in decisions, and belief that the program is valuable. Quantification and analysis of perceived *value* of the program demonstrates that this is a meaningful construct with powerful implications for work attitudes and retention of public health paraprofessionals. While training, monitoring, and extrinsic rewards such as pay and benefits are important, programs need to look beyond traditional, limited views of paraprofessional roles and recognize that front-line workers may be drawn to these positions by preferences for intrinsically-motivating work. EFNEP demonstrates the feasibility of implementing public health programs through paraprofessional educators in ways that maintain high job satisfaction and low intention to leave. Ultimately, efforts to create work contexts reflecting better understanding of community educators' motivations will benefit not only these educators' and their managers, but also the people and communities they serve.

Acknowledgments

The authors wish to thank the EFNEP staff for their participation and T. Hammer, K. Rasmussen, and M. Scott-Pierce for assistance with design and analysis. This research was supported by USDA's Cooperative State Research, Education and Extension Service (Hatch Project NYC 199411) and the National Institute of Diabetes And Digestive And Kidney Diseases (Award # T32DK007158). The content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies.

Bibliography

1. Lewin, S.; Dick, J.; Pond, P.; Zwarenstein, M.; Aja, G.; van Wyk, B., et al. Lay health workers in primary and community health care. *Cochrane Database Syst Rev.* 2005 [July 12, 2008]. Available at www.mrw.interscience.wiley.com/cochrane/clsystrev/articles/CD004015
2. Haines A, Sanders D, Lehmann U, Rowe AK, Lawn JE, Jan S, et al. Achieving child survival goals: potential contribution of community health workers. *Lancet* 2007;369:2121–2131. [PubMed: 17586307]
3. Swider SM. Outcome effectiveness of community health workers: An integrative literature review. *Public Health Nurs* 2002;19:11–20. [PubMed: 11841678]
4. Love MB, Gardner K, Vicki L. Community Health Workers: Who they are and what they do. *Health Educ Behav* 1997;24:510–522. [PubMed: 9247828]

5. Cason KL, Thames BJ, Polling RL. Factors associated with burnout among family and consumer sciences paraprofessionals. *J Fam Consum Sciences* 1998;90:71–75.
6. Rosin HM, Korabik K. Workplace variables, affective responses, and intention to leave among women managers. *J Occup Psychol* 1991;64:317–330.
7. Tourangeau AE, Cranley LA. Nurse intention to remain employed: understanding and strengthening determinants. *J Adv Nurs* 2006;55:497–509. [PubMed: 16866845]
8. Steers, RM.; Porter, LW.; Bigley, GA. *Motivation and Leadership at Work*. 6th. New York: McGraw-Hill; 1996.
9. Ryan RM, Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am Psychol* 2000;55:68–78. [PubMed: 11392867]
10. Heaver, R. *Improving Nutrition: Issues in Management and Capacity Development*. Washington, DC: The World Bank; 2002.
11. EFNEP. Expanded Food and Nutrition Education Program. USDA. 2009 [April 8, 2009]. Available at: <http://www.csrees.usda.gov/nea/food/efnep/efnep.html>
12. Dickin, KL. *The Work Context of Community Nutrition Educators: Relevance to Work Attitudes and Program Outcomes* [Dissertation]. Ithaca, NY: Cornell University; 2003.
13. Dickin KL, Dollahite JS, Habicht JP. Nutrition behavior change among EFNEP participants is higher at sites that are well managed and whose front-line nutrition educators value the program. *J Nutr* 2005;135:2199–2205. [PubMed: 16140898]
14. Yukl, G. *Development and Validation of the Managerial Practices Questionnaire*. Albany, NY: State University of New York; 1988.
15. Schmit MJ, Kihm JA, Robie C. Development of a global measure of personality. *Pers Psychol* 2000;53:154–193.
16. USDA. ERS4 Evaluation and Reporting System. Cooperative State Research, Education and Extension Service. 2005 [May 19, 2005]. Available at: www.csrees.usda.gov/nea/food/efnep/ers/ers4
17. Quinn, RP.; Staines, GL. *The 1977 Quality of Employment Survey*. Ann Arbor: Survey Research Center, Institute for Social Research, University of Michigan; 1979.
18. Weiss, DJ.; Dawis, RV.; England, GW.; Lofquist, LH. *Manual for the Minnesota Satisfaction Questionnaire*. Work Adjustment Project, Industrial Relations Center, University of Minnesota; 1967.
19. Saks, M. *Professions and the Public Interest: Medical Power, Altruism and Alternative Medicine*. London: Routledge; 1994.
20. Martin, MW. *Meaningful Work: Rethinking Professional Ethics*. New York: Oxford University Press US; 2000.
21. Gruenberg B. The Happy Worker: An analysis of educational and occupational differences in determinants of job satisfaction. *Am J Sociol* 1980;86:247–271.
22. Norris, JA.; Baker, SS. *Maximizing Paraprofessional Potential*. Malabar, FL: Krieger; 1998.
23. World Health Organization. Technical Report 780. Geneva: World Health Organization; 1989. Strengthening the performance of community health workers in primary health care.
24. Haider R, Ashworth A, Kabir I, Huttly S. Effect of community-based peer counsellors on exclusive breastfeeding practices in Dhaka, Bangladesh: a randomised controlled trial. *Lancet* 2000;356:1643–1647. [PubMed: 11089824]
25. Barlow JH, Bancroft GV, Turner AP. Volunteer, lay tutors' experiences of the Chronic Disease Self-Management Course: Being valued and adding value. *Health Educ Res* 2005;20:128–136. [PubMed: 15314037]
26. Whiddon B, Martin PY. Organizational democracy and work quality in a state welfare agency. *Soc Sci Q* 1989;70:667–686.
27. Schuster E. Paraprofessional burnout: What can we do? *J Fam Consum Sciences* 1998;90:74.
28. Hackman, JR.; Oldham, GR. *Work Redesign*. Reading, MA: Addison-Wesley; 1980.
29. Hersey, P.; Blanchard, KH.; Johnson, DE. *Management of Organizational Behavior: Utilizing human resources*. 7th. Upper Saddle River, NJ: Prentice Hall; 1996.

Figure 1.

Simplified conceptual framework showing the expected relationships of CNEs' perceived work context to job satisfaction and intention to leave (which are expected to influence retention and performance of staff, although these were not measured).

Figure 2. Correlation and partial correlation coefficients for relationships among perceived value of the program, intention to leave, and job satisfaction (Model 3).

Table 1

Descriptive Analysis of CNE Job Satisfaction and Intention to Leave (n = 115)

Variable	Mean ^a (±SD)	% of CNEs with positive work attitudes ^b
Overall satisfaction	80.13 (±12.69)	56.52
General satisfaction	84.00 (±18.20)	78.26
Satisfaction with specific facets of work:		
- intrinsic rewards	87.13 (±11.46)	78.26
- co-workers	83.57 (±15.74)	73.04
- supervisor	83.01 (±15.55)	74.78
- extrinsic rewards other than pay	78.84 (±15.68)	60.87
- pay	48.00 (±24.32)	22.61
Intention to leave	32.07 (±19.60)	80.87

^aMaximum score = 100 points.^bSatisfaction scores ≥ 80 and intention to leave scores ≤ 40 were classified as indicating positive attitudes about the job.

Table 2

Perceived Work Context, Job Satisfaction and Intention to Leave (n = 115)

Work context variables	Mean ^a (± SD)	Correlation ^b with job satisfaction	Correlation with intention to leave
<i>Managerial practices:</i>			
Supporting	4.42 (±0.76)	0.33***	-0.06
Networking	4.34 (±0.77)	0.21*	-0.16
Recognizing	4.29 (±0.88)	0.21*	-0.03
Mentoring	4.29 (±0.79)	0.31***	-0.27**
Monitoring	4.23 (±0.74)	0.18	-0.14
Clarifying	4.21 (±0.84)	0.21*	-0.20*
Inspiring	4.20 (±0.76)	0.37***	-0.26*
Planning	4.10 (±0.87)	0.24*	-0.14
Informing	4.09 (±0.81)	0.27**	-0.15
Problem-solving	4.04 (±0.90)	0.32***	-0.13
Delegating	3.95 (±0.94)	0.22*	-0.12
Voice	3.89 (±0.84)	0.41***	-0.22*
<i>Other work context factors:</i>			
Value of program	4.61 (±0.55)	0.41***	-0.45***
Supervisory relationships	4.02 (±0.74)	0.40***	-0.27**
Work relationships	3.92 (±0.68)	0.58***	-0.33***
Pressure for numbers	3.17 (±1.11)	-0.15	-0.19*
Perceived workload	3.16 (±1.17)	-0.43***	-0.34***

^a All work context scales were scored from 1 to 5 points.^b Pearson's correlation coefficients.

* P < 0.05.

** P < 0.01.

*** P < 0.001.

Table 3Regression Main Effects Model 1 Predicting Job Satisfaction (n = 115, Adj. R² = 0.596)

Job Satisfaction	Coef.	S. E.	P>t	Standardized Beta
Work relationships	0.420	0.058	0.000	0.448
Value of program	0.392	0.072	0.000	0.339
Voice	0.209	0.046	0.000	0.280
Supervisory structure	0.350	0.107	0.001	0.201
Post-secondary education	-0.288	0.098	0.004	-0.182
Intercept	-0.088	0.421	0.836	--

Table 4Regression Main Effects Model 2 Predicting Intention to Leave (n = 115, Adj. R² = 0.358)

Intention to leave	Coef.	S. E.	P>t	Standardized Beta
Value of program	-1.255	0.220	0.000	-0.439
Satisfaction with pay	-0.372	0.097	0.000	-0.289
Supervisory structure	-0.835	0.330	0.013	-0.194
Supervisory relationship	-0.392	0.162	0.017	-0.184
Intercept	10.947	1.147	0.000	--