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# Factors Influencing Worker Morale: Evaluating Provider Demographics, Workplace Environment and Using ESTs

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Factors influencing worker morale...

## **Factors Influencing Worker Morale: Evaluating Provider Demographics, Workplace Environment and Using ESTs**

### **ABSTRACT**

**Objectives:** Mental health organizations are strongly encouraged to implement empirically supported treatments (ESTs), however little is known about their working environments. The present study investigated how provider demographics, workplace environment and whether ESTs were used affected the worker morale. **Methods:** Front-line workers (N = 1,273) from 55 different programs in a single, large organization completed a measure of organizational culture and climate (OCC) and worker morale. A multilevel regression analysis used worker demographics to predict worker morale at level 1 and EST use and OCC scales to predict program level worker morale. **Results:** Worker morale was significantly negatively correlated with EST use and significantly correlated with OCC dimensions. Regression results showed that culture and climate but not EST use predicted morale. **Conclusions:** Although EST use by programs in this agency had negative effects on both morale and OCC, separately, the effect on morale was subsumed by the effect on OCC.

*Keywords:* empirically supported treatments, working environment, culture and climate, worker morale, Hillside Family of Agencies.

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## INTRODUCTION

In recent years, the mental health field has pushed to widely implement empirically supported treatments (ESTs). The responsibility of implementing ESTs falls squarely on front-line mental health social workers. According to Pace, (2008) and Gibbs, (2003), it is assumed that social workers must remain up-to-date with the newest practice knowledge in order to remain professionally relevant and best serve their clients. In an effort to bridge science and practice, barriers to ESTs usage have been investigated at the organizational-level. For instance, organizational studies have produced some interesting findings on the working conditions within programs implementing ESTs. Investigations should therefore continue to focus on factors that impeded EST implementation. The developing literature indicates that organizational working environments (e.g., culture and climate) shape decisions about whether or not ESTs are implemented (Hemmelgarn et al., 2006; Patterson et al., 2012; Patterson et al., 2013). Specifically, Patterson and colleagues (2012) found that programs offering an EST have significantly poorer work environments (e.g., organizational culture and climate) than programs that did not offer any ESTs. Working in a program with poor working conditions, such as low morale, would seem detrimental to the efforts needed to successfully implement ESTs.

The overall purpose of this study is to investigate how programs' provider demographics, their organizational work place environment (e.g., culture and climate) and whether ESTs are used, affects the morale of front-line clinical service providers working in those programs. The setting for the study is a single, large child and family services agency.

### **Morale in the Work Place**

The literature on work place morale in mental health settings is inconsistent and rife with methodological problems (Onyett, 2012; Richards et al., 2006). A systematic review of the

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literature found substantial differences in morale levels depending on the professional group and working context (Reininghaus & Priebe, 2007). High worker morale has been associated with workplace stability, supportive managers, and clear roles, while low morale has been associated with insufficient staffing levels, high levels of verbal abuse, risk of violence, and workers feeling they have no voice in the workplace (Bowers et al., 2009; Totman et al., 2011). In a systematic review of strategies to improve morale among staff working in mental health settings, Gilbody et al. (2006) found that educational interventions intended to improve staff's skills and competency along with work-based social supports increased worker morale.

Looking at worker morale more broadly, the literature uses terms like job satisfaction (Chen & Scannapieco, 2009; Gulliver, Towell, & Peck, 2003; Matos et al., 2010; Sharp, 2008); employee attitudes, motivation, and job performance (Park et al., 2003); or some level of organizational commitment (Cockshaw & Shochet, 2010; Jaskyte & Lee, 2009). The larger literature also provides definitions of morale with combinations of terms such as job satisfaction and other factors related to stress (Jones, 2009; Robertson et al., 2005); intended turnover with worker burn out, resilience or emotional exhaustion (Chen & Scannapieco, 2009; Lanham, Rye, Rimsky, & Weill, 2012; Mascha, 2006; Matos, Neushotz, Griffin, & Fitzpatrick 2010; Priebe et al., 2004; Robertson et al., 2005).

Various studies find job satisfaction to be associated with team role clarity, team identification, emotional exhaustion, gender, ability utilization, achievement, pay, and regard for coworkers (Gulliver, Towell, & Peck, 2003; Sharp, 2008). Similarly, staff morale is associated with supervision, role clarity, and degree of cooperation among staff (Mascha, 2006). One study found that job satisfaction among mental health workers is related to desire to stay, except when workers did not feel supported by their supervisors or perceived themselves as having a low level

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of self-efficacy at work (Chen & Scannapieco, 2009). In contrast, Mascha (2007) found that job satisfaction among staff was generally high, even though many reported exhaustion and desire to leave. Job satisfaction has moderately positive associations with level of pay and perception of professional status and strongly negatively associated with quality of interactions with physicians (Matos et al., 2010).

Implementing new practices, such as ESTs, may decrease job satisfaction and increase stress and burnout among mental health staff, even when intensive support is provided (Jones, 2009). Lanham et al. (2012) found that workplace-specific gratitude in mental health professionals shapes work environment attitudes and also predicts job satisfaction and burnout.

Jaskyte and Lee (2009) found that higher organizational commitment in social workers was associated with valuing new employee's capabilities and lower levels of role conflict. Although less developed, the literature on worker's overall attitudes suggests that attitudes are significantly associated with workplace environment and their impact on implementing ESTs (Parker et al., 2003; Patterson et al., 2012).

While the literature on worker morale provides many different terminologies, a high morale work force is one that has clear roles, personally committed to the organization, and is satisfied with their employment. A work force with low morale would lack these sentiments and might perceive their workplace as being non-caring and exhausting. With the continued effort to widely implement ESTs in health and wellness organizations, this study uses existing data to investigate whether worker demographics and the use of ESTs impact workplace morale.

## **METHODS**

### **Setting and Sample**

The setting for this study was Hillside Family of Agencies (HFA), which provides both

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residential and outpatient services in child welfare, mental health, juvenile justice, education, youth development, and developmental disabilities/mental health at 40 sites in 30 New York counties and in Prince George's County, Maryland. This study's subject population was the 1,552 employees identified as having direct contact with the children and families that this agency served. These 1,552 employees worked in 55 different programs. A senior HFA manager defined the 55 programs according to the program's service function and supervisory structure.

Of the total, 1,273 employees (82%) elected to participate in this study. Participants had a mean age of 35 years ( $SD = 10.98$ ; range: 19-73), 58.8% were female, and 74% were Caucasian. At the time that this survey was administered, participants had worked in the human service field for an average of 9.6 years ( $SD = 8.5$ ; range: 0-50) and at their current agency for an average of 5 years ( $SD = 5.62$ ; range: 0-36). Seventeen percent had completed high school, 17% had earned an associate's degree, 38% had received their bachelor's degree, 27% had obtained their master's degree, and only 1.2% had earned a doctoral degree. The predominant discipline in which these degrees were earned was education (22.8%), followed by social work (17.6%), psychology (15.6%), nursing (4.4%), and medicine (0.4%); the category of "other" made up for the bulk of the distribution (39.3%), but we were not able to determine the contributing disciplines. See Patterson et al. (2012; in-press) for a complete description of the agency and the sample.

## Measures

This study used the Organizational Social Context (OSC) Measurement System (Glisson, 2002; Glisson et al., 2008) to assess worker morale and organizational culture and climate. The OSC consists of 105 items with seven subscales rated by a program's service providers to assess the organizational culture and organizational climate at the program level and morale at the

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service provider level. A program's culture and climate scores are a composite of its workers' perceptions, while the morale score is the perception of each of the workers.

Three scales comprise an organization's culture: Proficiency (.94), Rigidity (.81), and Resistance (.81: all alphas from Glisson et al. [2008]). Proficient cultures will place the health and well-being of clients first and workers will be competent, working to meet the unique needs of individual clients with the most recent available knowledge (e.g., "Members of my organizational unit are expected to be responsive to the needs of each client" and "Members of my organizational unit are expected to have up-to-date knowledge"). Rigid cultures allow workers a small amount of discretion and flexibility in their activities, with the majority of controls coming from strict bureaucratic rules and regulations (e.g., "I have to ask a supervisor or coordinator before I do almost anything" and, "The same steps must be followed in processing every piece of work"). Resistant cultures are described as workers showing little interests in changes or new ways of providing services. Workers in resistant cultures will suppress any openings to change (e.g., "Members of my organizational unit are expected to not make waves" and "Members of my organizational unit are expected to be critical"). Higher scores indicate more of the scale construct, which is true for all OSC scales.

Three factors comprise an organization's climate: Engagement (.78), Functionality (.90), and Stress (.94). Engaged climates are characterized by the workers' perceptions that they can accomplish worthwhile activities and stay personally involved in their work while remaining concerned about their clients (e.g., "I feel I treat some of the clients I serve as impersonal objects"—reverse coded and six items "I have accomplished many worthwhile things in this job"). Workers in functional climates receive support from their coworkers and have a well-defined understanding of how they fit into the organizational work unit (e.g., "This agency

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provides numerous opportunities to advance if you work for it” and, “My job responsibilities are clearly defined”). Stressful climates are ones where workers are emotionally exhausted and overwhelmed as the result of their work; they feel that they are unable to accomplish the necessary tasks at hand (e.g., “I feel like I am at the end of my rope” and, “The amount of work I have to do keeps me from doing a good job”).

Worker morale (.93) consists of 15 items assessing satisfaction (e.g., “How satisfied are you with the chance to do things for clients”) and organizational commitment (e.g., “I am proud to tell others that I am part of this organization”). Lastly, the OSC includes nine demographics questions (age, years of full-time human service work experience, years at present agency, education level, educational major, race, Hispanic ethnicity, and gender).

Completed surveys were scored by Dr. Glisson at the Children’s Mental Health Services Research Center. The data file of the six culture and climate scale scores were computed as T-scores, one for each of the 55 programs. The worker morale scores were also computed as T-scores. Sample demographics and program codes were scored for each participating worker.

EST use was determined by a senior HFA manager in consultation with the program’s manager and supervisors. In addition, the programs employing ESTs identified which ESTs were used. Examples of ESTs used included Positive Behavioral Interventions & Support and Trauma Focused-Cognitive Behavioral Therapy. However, no data were available on when specific ESTs were adopted, level of fidelity to the EST protocol, or consistency of an EST’s use for the target problems. Of the 55 total programs, 27 programs identified the utilization of specific ESTs.

### **Data Collection Procedure**

Upon IRB approval, the OSC survey was administered to participants in paper and pencil format. Data collection occurred in groups, with no agency supervisory or administrative



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personnel present. Each group was read instructions assuring subjects that their responses were anonymous and data would only be reported back to the organization in aggregated form.

Participating employees received no compensation for participation.

## **RESULTS**

Since EST use and culture and climate are program-level variables, and morale score and demographics are worker-level variables, a two-level model was used, in which at level 1 worker demographics were used to predict worker morale, and at level 2, EST use and culture and climate scores were used to predict the level 1 morale intercept. It was assumed that the coefficients for the demographics variables were not random variables. Although the data were analyzed as a two-level model, a two-level sampling plan did not generate the data, as only a single agency participated. Further, in that agency, random selection did not occur at either the worker or program levels. While significance levels were reported, it is not known to what extent this agency is representative of child and family mental health agencies of a similar size and scope or of such agencies in general. Thus we believe these data must be regarded as a data point against which the data from samples of agencies may be compared.

Of the 1,273 participants, adequate data for computation of the culture and climate and morale scores were available for 1,241 participants. Although the morale scores had no missing data, the eight demographics variables (age, position, education level, educational major, white ethnicity, and female gender) had missing data percentages that ranged from 2.5% to 6.4% of 1,241, except for educational major, which had 13.1% and was mainly due to high school level workers not having a major. Correlations between morale and demographic data missingness were small, -.001 (years at present agency) to .057 (major), which was significant at  $p < .05$ .

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Complete demographic data were available for 984 workers across the 55 programs. Excluding cases with missing data, cluster size ranged between 2 and 54 with a mean of 17.89

Morale was reported as a T-score and values ranged between 22.99 and 72.91, with a mean of 53.51 and a standard deviation of 8.91. The distribution was slightly negatively skewed (-0.31) and flattened (-0.071). Program level means for morale ranged between 45.90 and 63.49 with a mean of 53.98 and a standard deviation of 4.14. Unlike for the worker level distribution, the means were positively skewed (0.22) and flattened (-0.42). The intraclass correlation was .142, indicating a substantial level of variability at the program level.

To begin, a multilevel basic statistics model was estimated in Mplus 6.1 (Muthen & Muthen, 1998-2010), in which the level 2 Morale mean was correlated with EST use and the culture and climate scales. As shown in the result in Table 1, the correlations were in the expected direction: a more positive culture or climate score was associated with a higher morale score. EST use, however, was associated with lower program-level Morale ( $r = .35$ ). Each of the culture and climate scales had larger correlations with morale than EST use did. Of the culture and climate dimensions, functionality was very highly correlated ( $r = .93$ ) with morale, as was resistance ( $r = .85$ ).

### **Insert Table 1 about here**

To understand how worker characteristics relate to morale (and how to optimally model those variables for the subsequent regressions involving level 2 predictors), we estimated a model with no level 2 predictors. Contrast variables were constructed for position, educational level, and major. The reference category for position was “Provider,” for educational level it was “High School graduate,” and for major it was “Other major.” Due to small cell sizes, the “Masters” and “PhD” categories were combined for educational level and the “Nursing” and

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“Medicine” categories were combined for major. Preliminary analyses revealed that age, years of work experience, and years at present agency all had curvilinear relationships with morale and that the model with a years of work experience squared term yielded the greatest multiple R increment, compared to squared terms for either of the other two time-related predictors. This model was the final level 1 model and it is reported in Table 2.

**Insert Table 2 about here**

The level 1 results showed that morale was related significantly to all worker characteristics except for white and female and that, as a set, worker characteristics had an R squared of .086, which was significant at the .001 level. With respect to individual predictors, Morale scores showed a curvilinear relationship with years of human service work, as Morale scores decreased with increasing time; however, the rate of decrease lessened with increasing time. Morale increased with age but decreased with years in present position. Compared to persons who worked as providers, persons who also had supervisory or managerial responsibilities had higher Morale scores. However, persons with each level of post-secondary education (Associates, Bachelors, Masters/PhD) reported lower morale scores than did high school graduates. Lastly, social work majors reported higher morale scores than the other major workers. This most likely is due to managers having higher educational levels and social work majors being the most prevalent among those managers with higher educational levels.

To place the effects of the different characteristics into a standard context, translating the coefficients into effect sizes is useful. Using the standard deviation of the total sample (8.91) as the reference, the effect of position is 0.34 for supervisors and 0.87 for managers; the effect for educational level is -0.38 for Associates, -0.35 for Bachelors, and -0.50 for Masters/PhD; and the effect for social work majors is 0.23. The effect size for year, age, experience or job tenure is small, but in decade terms, the effect is 0.13 for age, -0.26 for job tenure and, for a decade

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centered in the median years of experience, which is 7, the effect is -0.21. In effect size terms, most effects are small, except for the manager effect and the Masters/PhD effect.

We had originally planned to replicate Glisson et al.'s (2008) analysis of the morale component scales, in which the six culture and climate scales were entered simultaneously. However, the very large correlations between the culture and climate scales and morale suggested that multiple collinearity might be a problem with a resulting inflation of standard errors. Instead, we estimated a series of multilevel regressions, two for each culture and climate scale. In each pair of regressions, morale was regressed on the demographic variables at level 1. The level 1 morale intercept was regressed on a culture and climate scale in the first regression of the pair, and on the culture and climate scale and EST use in the second regression of the pair. Table 3 shows the level 2 results of these regressions. We do not show the level 1 results because the coefficients vary slightly around those reported in Table 2 in response to the minimization point of maximum likelihood function for the different level 2 predictors.

### **Insert Table 3 about here**

Consistent with the correlations in Table 1, the Equation 1 standardized coefficient for each of the equations is .90 or greater, except for the equation for Stress where the coefficient is .89. The increase in the coefficient magnitudes is most likely due to the correlations with computing program-level morale with the estimated cluster mean, whereas in Table 3, the estimated program-level morale score has been adjusted for the worker-level demographics. The residual variances for each of the Equation 1 regression are not significant, indicating that residual variances, while not equal to 0.00, are also not significantly different from 0. The smallness of the residual variance for each equation then offers little variance that EST use can predict. Therefore, as Table 3 shows, EST is not a significant predictor of program-level Morale

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after controlling for any dimension of culture or climate. That said, EST use has a non-zero effect in the negative direction on program-level morale for every culture or climate dimension, except for Functionality.

In summary, these analyses found that EST use was associated with significantly lower program-level morale and that each of the culture and climate dimensions were significantly and very highly correlated with morale in the expected direction. The results found that worker demographics were associated with morale, notably, position and education level. Lastly, once worker demographics had been controlled, EST use was no longer significantly related to program-level morale and each culture and climate dimension had a nearly perfect relationship with morale.

## **DISCUSSION AND APPLICATION TO PRACTICE**

The purpose of this study was to examine the effects of a program's working environment (e.g., culture and climate), its workers' demographics, and whether the program used ESTs on its workers' morale among programs in a single, large child and family services agency. The results showed that several worker demographic characteristics were related to morale. The variables with the largest effect sizes were the manager position contrast and Masters/PhD educational level contrast, which were of a large and a medium size, respectively. The remainder of the significant variables had small effects. The culture and climate dimensions had large correlations with program-level morale, in the .60 to .90 range, while EST use had a smaller correlation with program-level morale. After entering worker demographics in separate multilevel regressions, each culture and climate scale predicted program level morale in the .89 to .99 range in standardized terms. EST use was not significant in any regression analysis.

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The single most important limitation of this study is the data were obtained from a single, albeit large, child and family services agency. Within the limits of agency service providers' possibly nonrandom voluntary participation and the exclusion of a few program that did not meet OSC scoring requirements for program size, this study is an analysis of the agency as a population. We cannot establish whether this agency is representative of all agencies, or even of other agencies at a similar size level. More importantly, we cannot establish whether these results are a good proxy for the results that would be obtained from a sample of agencies. Although we indicated significance levels, we believe that the observed coefficient values should be regarded as data points. Another limitation concerns the labeling of a program as using ESTs. A program was labeled as using ESTs if the program's manager and supervisors identified it as doing so. However, that is not to say that all the treatment interventions or protocols used by that program were empirically supported. Declaring that a program uses an EST does not necessarily mean that the EST is provided to all qualifying patients/clients or that its implementation is faithful to the EST's protocols. Thus the EST label may represent more of a fact-based belief rather than data-based fact.

This study provides additional data on the relationship between a program's culture and climate dimensions and the program level morale of its workers. To the best of our knowledge, the sole comparison to this study is Glisson et al. (2008) and a comparison of their data and ours show both similarities and important differences. Although Glisson et al. (2008) reported correlations between the culture and climate scales and the Morale component scales (Organizational Commitment and Job Satisfaction) rather than the Morale composite, using their correlation data, it is possible to compute what the correlations of the culture and climate scales with Morale would have been. Our correlations matched theirs in sign but were much larger. For

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instance, we compute that Glisson et al. would have had a correlation of  $-.23$  between Rigidity and Morale; we found a correlation of  $-.60$ . We think it's likely that the differences in the two sets of correlations were the result of greater homogeneity among Hillside's programs than among Glisson et al's 100 agencies. Correlation magnitude differences aside, both results reveal that Morale is most closely related to the climate dimension of Functionality and that other closely related culture and climate dimensions include Resistance and Proficiency (both culture dimensions) and Stress. Thus Morale, computed as the average of a program or organization's workers, appears to provide a gauge of an organization's culture and climate, albeit one that is also reflective of workers' position in the organization, along with their educational and demographic backgrounds.

These findings support Glisson and colleagues' 2008 observation that morale could be improved by focusing on enhancing the cooperation between coworkers and administrators. Also, giving workers clear insights of how they fit into their work environment and the direct experience of achievements within the organization would improve worker morale. While Glisson et al.'s (2008) outcomes indicated morale was not associated with a worker's stress level, this study finds that morale could be improved by lowering stress. Relief from the feelings that come with being emotionally exhausted, overloaded, and unable to complete the required work would go far in improving worker morale.

Patterson et al. (2012) found that programs using ESTs were significantly more rigid, resistant to change, and stressed compared to programs not using ESTs. In addition, programs using ESTs were also significantly less clinically engaged and functional. This study extends those findings to morale, which is also a worker level measure. However, the regression results indicate that relationship between EST use and morale is no longer significant once any of the

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culture and climate dimensions are controlled. Although an appealing interpretation of these results is that improvements in the culture and climate of organizations would lead to improvement in morale, the converse relationship cannot be rejected. Regardless of directionality, it is still unclear if morale has important, unique effects on the workplace apart from culture and climate?

With this in mind, it is important to evaluate if workers who use ESTs also experienced poor morale. As it turned out, not only are the working conditions poor within programs that use ESTs, worker morale is also significantly poorer in EST using programs. While it would make sense that poor working conditions would impact worker morale, these findings are different from past evaluations looking at the relationship between organizational culture and climate and worker morale.

Because this study found a strong correlation between many of the factors making up organizational culture and climate, entering the EST factor into the correlation mix would not yield any further relationships. The strong correlation between culture and climate and morale leaves very little room for any other correlation finding. A lingering question still remains after these latest findings: is morale a consequence of culture and/or climate? The analytical models suggest that might be the case, but morale could also influence the culture and climate dimensions. Whether organizations focus on improving the culture and climate or worker morale, it seems, because of their very close relationships, changes in one area greatly increase the likelihood of changes in the other.



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Table 1

Correlations Between EST Use, Culture and Climate Scales, and Program Level Morale (N = 55)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Mean	SD
1) EST Use	1.00	-.26	.38**	.33*	-.30*	-.38**	.46***	0.49	0.50
2) Proficiency	-.26	1.00	-.25	-.61***	.38**	.76***	-.52***	52.35	5.61
3) Rigidity	.38**	-.25	1.00	.66***	-.38**	-.43***	.39**	59.45	6.28
4) Resistance	.33*	-.61***	.66***	1.00	-.51***	-.75***	.62***	66.14	8.63
5) Engagement	-.30*	.38**	-.38**	-.51***	1.00	.51***	-.46***	43.72	7.04
6) Functionality	-.38**	.76***	-.43***	-.75***	.51***	1.00	-.76***	60.15	8.71
7) Stress	.46***	-.52***	.39**	.62***	-.46***	-.76***	1.00	56.47	6.70
Morale	-.35**	.70***	-.60***	-.85***	.74***	.93***	-.76***	53.94	3.44

Note. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . Means, standard deviations and correlations are maximum likelihood estimates.

## Factors influencing worker morale...

Table 2

Multilevel Model of Worker Demographics Predicting Morale (Level 1 N = 984; Level 2 N = 55)

Variable	Estimate	SE	<i>p</i> value	Beta
Level 1				
Experience (yrs.)	-0.358	0.100	0.000	-0.348
Experience squared	0.012	0.003	0.000	0.378
Present job (yrs.)	-0.230	0.074	0.002	-0.145
Age (yrs.)	0.112	0.042	0.007	0.141
White	-1.049	0.812	0.196	-0.048
Female	1.062	0.583	0.069	0.059
Position				
Supervisor	3.082	0.761	0.000	0.119
Manager	7.802	1.672	0.000	0.117
Other	0.945	0.897	0.292	0.033
Education level				
Associates	-3.437	1.251	0.006	-0.146
Bachelors	-3.088	1.027	0.003	-0.176
Masters/PhD	-4.416	1.140	0.000	-0.236
Educational major				
Education	0.621	0.873	0.477	0.030
Social Work	2.019	0.623	0.001	0.089
Nursing/Medicine	1.378	1.648	0.403	0.032
Psychology	-0.331	0.913	0.717	-0.014
Residual Variance	68.482	3.863	0.000	
R-Square	0.086	0.018	0.000	
Level 2				
Mean	54.560	1.802	0.000	
Variance	5.022	1.813	0.006	

Note. Reference category for position is provider. Reference category for education level is high school. Reference category for educational major is other.

## Factors influencing worker morale...

Table 3

Level 2 Coefficients from Multilevel Model of Worker Demographics, Culture and Climate Scales and EST Use Predicting Morale (Level 1 N = 984; Level 2 N = 55)

Variable	Equation 1			Beta	Equation 2			Beta
	Estimate	SE	<i>p</i> value		Estimate	SE	<i>p</i> value	
Proficiency	0.445	0.058	.000	0.929	0.422	0.058	.000	0.852
EST Use					-1.127	0.747	.131	-0.203
Residual Variance	0.996	0.787	.206		1.090	0.792	.168	
R-Square	0.862	0.099	.000		0.859	0.095	.000	
Rigidity	-0.381	0.047	.000	-0.955	-0.364	0.049	.000	-0.901
EST Use					-0.684	0.606	.259	-0.135
Residual Variance	0.550	0.794	.488		0.511	0.770	.507	
R-Square	0.912	0.109	.000		0.921	0.105	.000	
Resistance	-0.323	0.032	.000	-0.983	-0.315	0.034	.000	-0.950
EST Use					-0.448	0.657	.495	-0.078
Residual Variance	0.278	0.457	.544		0.340	0.464	.463	
R-Square	0.965	0.054	.000		0.959	0.053	.000	
Engagement	0.298	0.050	.000	0.900	0.282	0.053	.000	0.835
EST Use					-0.687	0.770	.372	-0.144
Residual Variance	1.032	0.813	.204		1.200	0.851	.158	
R-Square	0.810	0.134	.000		0.789	0.132	.000	
Functionality	0.352	0.026	.000	0.994	0.353	0.037	.000	0.997
EST Use					0.037	0.806	.963	0.006
Residual Variance	0.106	0.560	.850		0.098	0.578	.865	
R-Square	0.989	0.058	.000		0.990	0.061	.000	
Stress	-0.369	0.049	.000	-0.885	-0.360	0.050	.000	-0.862
EST Use					-0.241	0.816	.768	-0.043
Residual Variance	1.695	1.187	.153		1.728	1.173	.141	
R-Square	0.783	0.138	.000		0.779	0.136	.000	

Note. EST use is coded 0 = Not used, 1 = Used.