

Behrend, T.S., Poncheri, R.M., & Surface, E.A. (2007, August). *Procedural justice perceptions and withdrawal intentions related to skill-based pay*. Paper presented at the 115th annual convention of the American Psychological Association, San Francisco, CA.

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This study demonstrates that specific procedural justice perceptions related to a skill-based pay system impact organizational withdrawal intentions. Perceptions of fairness were negatively related to intentions to leave, suggesting that low procedural justice may lead to increased desire to leave. Organizations using skill-based pay should monitor perceptions of procedural justice.

An organization's compensation system can have a significant impact on employee attitudes and performance (Roth, 2006). Historically, workers have been compensated under a system in which compensation was based on seniority or job responsibilities. However, the changing nature of work in the past 30 years has resulted in jobs becoming more fluid, rather than a concrete collection of tasks that can be easily assessed (Heneman & Ledford, 1998). This has led to the creation of alternative systems, which enable employers to compensate their employees in different ways. Traditional job- and seniority-based compensation systems have started to incorporate more person-contingent pay systems (Mahoney, 1989). One such system,

skill-based pay (SBP), compensates individuals for developing and maintaining skills that are useful to the organization. Perceptions of justice are important to the effectiveness of compensation practices (Tremblay, Sire, & Balkin, 2000) and have been linked to organizational withdrawal (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). The incentive value or motivating effect of compensation has been related to withdrawal as well (Tekleab, Bartol, & Liu, 2005). The purpose of the current study is to investigate the influence of employees' perceptions of a SBP system's fairness and its motivating effect on intentions to leave a military organization.

Skill-Based Pay. Alternatives to pay for the job or job tenure (seniority) include pay-

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for-performance (merit pay), pay-for-education, or other special systems that reward employees for making valuable contributions to the organization. One type of special pay system that has gained recent popularity is SBP. In SBP systems, employees are paid a wage, a special bonus, or monthly stipend that structure pay levels and differentials relative to a particular skill (or set of skills) valued by the organization (Jenkins, Ledford, Gupta, & Doty, 1992; Murray & Gerhart, 2000). To receive SBP, employees must possess or demonstrate a particular level of the skill or skills. However, performance of the skill is not the basis of compensation—instead; certification serves as a proxy for the employee's ability to perform a behavior in the future if called upon to do so. With a SBP system, the organization is often paying for the availability of valued skills in the workforce, not their daily use. Certification for these skills is analogous to traditional performance appraisal in a pay-for-performance system (Ledford, 1995). Often, organizations will offer training to assist in the certification process, either by conducting training directly or offering incentives to obtain external training.

Several potential positive outcomes can result from implementation of such a system. By redefining work as a collection of knowledge, skills, and abilities, employees gain the ability to become more global, and more oriented toward change (Heneman & Ledford, 1998). SBP can improve employees' motivation to receive cross-training, further adding to their development of new technical and social skills. Many organizations use special pay systems in order to increase organizational flexibility. This is especially important when an organization must adapt to a quickly changing environment. This flexibility also minimizes the negative effects of turnover,

as the remaining workers will have the necessary skills to compensate for those who have left the organization (Ledford, 1995). Additionally, SBP can be used as a supplemental pay to retain workers with critical skills in a competitive labor market. Thus, the benefits of a well implemented SBP system can affect employees directly, and the organization as a whole. Recent research in the area of compensation has emphasized the growing popularity of SBP systems. Despite the fact that this type of compensation is being used more frequently in organizations (Lawler, Mohrman, & Ledford, 1998), research related to this topic in the field of industrial/organizational psychology is lacking.

Literature regarding SBP systems has consistently emphasized the positive outcomes that follow its implementation. Lee, Law, and Bobko (1999) indicated that implementation of SBP systems is associated with increased organizational flexibility, employee productivity, and employee satisfaction in addition to decreased absenteeism and turnover. However, as Lee et al. (1999) point out, there has been little exploration of the conditions that are associated with the occurrence of these outcomes. They proposed that one condition required for the success of a SBP plan is the perception that the procedures associated with the plan are fair. This research was based in part on a study by Gupta, Ledford, Jenkins, and Doty (1992), who found that a key factor in the success of a SBP plan is the employee's understanding and knowledge of how the system works, such as the availability of training and the details of the certification process. These findings were confirmed by Lee et al. (1999), who found that the system failed to achieve the outcomes of increased satisfaction or flexibility when procedural justice attributions were low.

The certification process is a highly important feature of the pay system. The way the plan is enforced also has implications for its effectiveness. The design of the pay levels and skill certification methods must be handled in such a way as to appear fair and clear to all involved. As Gupta et al. (1992) found, all employees must be able to understand the plan, and the rationale that underlies the plan, in order for it to be effective. If they do not understand, then employees are more likely to believe it is unfair. This finding is most clearly demonstrated in research related to procedural justice. Procedural justice theory asserts that if a procedure is unclear, it is unfair (Levanthal, 1976).

Procedural Justice. Procedural justice is traditionally defined as the perceived fairness of an organization's procedures. However, some debate exists regarding the best definition of procedural justice. Thibaut and Walker (1975) define it simply as process control, or the perception of having adequate voice in the resolution of a legal dispute. Alternatively, Levanthal (1976) delineated six specific rules for procedural justice, three of which are applicable to SBP systems: (1) decisions must be based on accurate information, (2) allocation procedures should be consistent over time and across people, and (3) all decisions must be correctable.

The literature regarding organizational justice and organizational withdrawal is quite rich. Colquitt et al. (2001) reported meta-analytic findings from over 180 studies demonstrating that organizational justice was negatively related to withdrawal behaviors, including lateness, absenteeism, and turnover. Procedural and distributive justice were shown to separately influence withdrawal, but some evidence exists that suggests that of the two types of justice, procedural justice has a larger impact on withdrawal (Dailey & Kirk, 1992).

Masterson, Lewis, Goldman, and Taylor (2000) found that procedural justice played a large role in predicting withdrawal, in combination with interpersonal justice (i.e., justice in interpersonal relationships).

Although some debate exists as to the proper definition of procedural justice, the results of Colquitt et al.'s (2001) meta-analysis demonstrated that regardless of the definition, procedural justice did relate to withdrawal behaviors. Colquitt et al. reported an overall effect of $r = -.36$ ($N=39$) for broadly defined procedural justice, $r = -.27$ ($N=21$) for procedural fairness perceptions, $r = -.19$ ($N=10$) for process control, $r = -.23$ ($N=6$) for Levanthal's criteria, $r = -.02$ ($N=2$) for interpersonal justice, $r = -.21$ ($N=8$) for informational justice, and $r = -.41$ ($N=18$) for distributive justice. Taken together, these effects present a strong case for the relationship between procedural justice and withdrawal.

While we can conclude that organizational justice does relate to withdrawal, the antecedents of justice attributions are not as clear. Contributing to the lack of understanding is the fact that justice is most often measured as global affect toward the organization. A typical procedural justice measure includes items addressing all aspects of the organization's procedures (i.e., grievance, pay, promotion, etc.; Fryxell & Gordon, 1989). There is reason to believe that different organizational information may influence different types of justice attributions. While satisfaction with pay is typically understood to influence distributive justice perceptions (Colquitt et al., 2001), SBP is associated with specific rules and procedures, the clarity of which impacts perceptions of procedural justice.

Based on the assertion that global evaluations of justice have an impact on employee withdrawal behaviors, the current

study investigated whether justice evaluations tied to the SBP system features would have a similar effect on intent to leave the organization. Intent to leave has been found to predict actual turnover (e.g., Masterson et al., 2000) and has often been used in research (e.g., Clugston, 2000). Therefore, the influence of the perceived motivating effects of the SBP system on intent to leave the organization was investigated.

Research Context and Questions. A sample from a military organization was used for the current study. The military employs a number of SBP systems to promote the development and maintenance of critical skills. Foreign language proficiency is one such skill that has increased in importance in recent years (Rovira, 2003; Silva & White, 1993; Surface, Dierdorff, & Donnelly, 2004; Swender, 2003; U.S. Department of Defense, 2005; Weber, 2004). The military has a standardized SBP system—Foreign Language Proficiency Pay (FLPP)—designed to promote the acquisition and maintenance of foreign language skills by military personnel. Foreign language proficiency is certified via a standardized language test (Defense Language Proficiency Test; for a description see Silva & White, 1993) that must be taken annually to maintain SBP. In the U.S. military, FLPP is a monthly supplement to base compensation, and its amount depends on the level of proficiency demonstrated and a number of other factors, such as the criticality of the language. Some Soldiers have reported frustrations with the method of assessment and allocation. Based on this information, it follows that poor evaluations of the system may result in some cases. Additionally, military personnel have the periodic choice to reenlist and remain with the organization or to leave. Therefore, understanding intents to leave or to reenlist

is important for organizational planning. These circumstances make the military an ideal choice for an investigation of the research questions explored in this study.

As Lee and her colleagues (1999) reported, poor perceptions of the system can lead to low procedural justice evaluations, which in turn could lead to the failure of the system to achieve its intended outcomes. Therefore, it is of interest to determine if low justice attributions influence important attitudinal outcomes, such as intentions to leave an organization. Therefore, the following research questions were examined.

Research Question 1: Do evaluations of the motivating effect of a SBP plan relate to evaluations of the plan's fairness?

Research Question 2: What is the relationship between evaluations of SBP (i.e., the plan's motivating effect and the plan's fairness) and intentions to leave the organization?

Method

Participants

The participants in this study were 1039 members of a large military organization who volunteered in response to an email solicitation. Because the survey used branching to ensure participants received the most appropriate subset of items, 852 respondents had partial data related to the constructs of interest, and 274 respondents had complete data. Of the 852 participants, 59% were members of the organization for less than four years. Twenty-eight percent reported receiving SBP at the time of the survey and 45% had received SBP at some point during the last four years.

Procedure

Data were collected via a web-based survey to assess current perceptions of foreign language training, proficiency, and policy issues. In addition to demographic questions and several sections regarding the mode and effectiveness of their training, questions were asked regarding attitudes toward SBP, including aspects related to motivation and fairness. Participants also responded to items addressing their intent to leave the military due to language issues.

Measures

Responses for all items were given on a 5-point Likert-type rating scale from 1 (strongly disagree) to 5 (strongly agree).

Motivation from Skill-Based Pay (3 items, (= .86). This construct was operationalized as perceptions of the motivating effect or incentive value of the SBP system to accomplish the plan's goals of acquiring and maintaining foreign language skills. Three items were used to measure this construct. An example item is: "[SBP] motivates me to acquire new language skills during personal time [i.e., not paid duty time]."

Procedural Justice (3 items, (= .74). This construct was operationalized as perceptions of the procedural fairness of the SBP system designed to promote the acquisition and maintenance of foreign language proficiency. This construct was measured with three items and an example item is: "Procedures for allocating [SBP] are fair."

Intent to Leave (4 items, (= .68). This construct was operationalized as personnel's intent to leave the organization related specifically to foreign language policies and issues. The participants' intent to leave the organization was assessed with four items. An example item is: "I will leave the organization if I cannot get the language training I need."

Data Analytic Procedures

To determine the construct validity of our measures, three models were tested using confirmatory factor analysis (CFA). CFA allows for the specification and evaluation of models comprised of latent variables and their manifest indicators (e.g., survey items). These analyses were intended to determine if the items represented a single latent construct or two latent constructs. Model 1 tested the one-factor representation, which is tested as an alternative model. Model 2 tested the correlated two-factor representation, and Model 3 tested the structure of the criterion. To address our two research questions, a structural equations model (Model 4) in which the correlated latent constructs of motivation and procedural justice (Model 2) predicted intent to leave the organization (Model 3) was tested.

Results

Table 1 contains the descriptive statistics and intercorrelations for the items used in the analyses. In order to address the first research question, which concerned the nature of the relationship between motivation related to the SBP system and perceptions of the plan's fairness, several models were tested using CFA. In terms of evaluation criteria, we utilized the chi squared goodness-of-fit test, comparative fit index (CFI), Tucker-Lewis index (TLI; also known as the non-normed fit index or NNFI), standardized root mean residual (SRMR), and the root mean square error of approximation (RMSEA). Several researchers have recommended that the CFI, TLI, and NFI should be above .90 for the model to be considered a reasonable fit (Hu & Bentler, 1999; Lance & Vandenberg, 2002; Vandenberg & Lance, 2000). Vandenberg and Lance (2000) and Millsap (2002) indicate that 0.08 should be

considered the upper limit for good fit for the RMSEA. Hu and Bentler (1999) also recommend 0.08 as the upper limit for the SRMR.

First, we tested a one-factor model in which all six items related to motivation and procedural justice loaded on one factor. This model resulted in a poor fit, $\chi^2(9, N=567) = 348.50, p < .001$. The fit indices for this model also demonstrated a poor fit according to the recommendations specified by Hu and Bentler (1999; See Table 2). After testing this model, a second model was tested. The model specified two correlated factors—motivation and procedural justice related to the SBP system. The chi-square goodness-of-fit test indicated that this model was a better fit than Model 1 ($\chi^2(9, N=567) = 29.93, p < .001$). The third CFA model was conducted in order to assess the factor structure of the criterion, intent to leave the organization. The fit statistics for this model indicated that the model adequately described the criterion ($\chi^2(2, N=350) = 5.16, p = .07$). Table 2 contains a complete listing of fit statistics from all of the models tested. Based on these results, we can test our a priori structural equations model.

Second, to address the research questions, a structural equations model was specified, in which motivation related to SBP and perceptions of procedural justice of the SBP system predicted the criterion, intent to leave the organization. Although the chi-square goodness of fit test was significant, $\chi^2(32, N=274) = 77.48, p < .001$, the fit of the model was adequate as specified by Hu and Bentler (1999), CFI = .954 and RMSEA = .072[0.052 -0.093]. Table 3 contains the standardized factor loadings for each variable in Model 4. The correlation between procedural justice attributions and motivation related to the SBP system was .30, $p < .01$, indicating that as perceptions of SBP procedural justice increase so do perceptions of SBP incentive

value. The standardized path coefficients show a moderate negative relationship between procedural justice attributions and intent to leave the organization ($-.39, p < .01$)—suggesting that as perceptions of procedural justice increase intentions to leave decrease—and also indicated a positive relationship between motivation and intent to leave the organization, (.33, $p < .01$). See Figure 1 for a depiction of these relationships. Together, justice perceptions and motivation explained 15% of the variance in intent to leave.

Discussion

This study demonstrates that implementing a SBP system should not be seen as just a simple fire-and-forget solution for organizations seeking to improve flexibility, increase skill availability, and decrease turnover. The design and implementation of SBP systems must take psychological principles and research into account to ensure that the system has the desired impact on the target behavior or skill. As this study demonstrates, organizations should periodically monitor employee perceptions and outcomes related to the SBP to assess if the system is having the desired effect. This information can then be used to improve the system.

One of the findings from this study shows that as perceptions of procedural justice increase, intent to leave the organization decreases. Lee et al. (1999) previously demonstrated that unfair compensation systems do not achieve the desired outcomes of flexibility and increased skills. This study demonstrates that low procedural justice attributions may be related to increased turnover (i.e., using intent to leave as a proxy) as organizational members become frustrated at the perceived unfairness of the system.

The counterintuitive positive relationship between motivation related to SBP and intentions to leave the organization suggests that focusing on improving the reward features of the system may not be sufficient. Employees may agree that the system is motivating, but still believe that it is unfair. Furthermore, military personnel may have reported being motivated to obtain skills with the express intent to increase their attractiveness to other employers. Military personnel are employed on contracts for a finite amount of time and typically have the choice to re-enlist when the contract is completed. Given the current military and homeland security context and the heavy use of contractors by government organizations, military personnel with specialized skills, such as language, have numerous options for employment in the private sector earning more money. Some military personnel leave after their contract has been fulfilled to pursue these opportunities with private companies. For example, in an effort to address personal shortages and remain competitive with employers in the private sector, the U.S. Special Operations Command has begun to offer a \$150,000 re-enlistment bonus to SOF operators who have served for 19 years (e.g., Pappalardo, 2005). This incentive is designed to retain experienced operators in whom the government has already invested large amount of training dollars.

Several limitations of this study must be acknowledged. First, this study used the respondent's intention to leave as the criterion, rather than actual turnover. Although turnover intentions may be seen as less indicative than actual behavior, intent to leave has been shown to predict actual turnover (Masterson et al., 2000). Turnover intentions are also related to the withdrawal of citizenship behaviors (Chen, Hui, & Segó, 1998). A large number of studies have focused on the justice-turnover intention

link. Studies that have examined actual turnover rates have found comparable results (Jones & Skarlicki, 2003). Future research should be conducted using actual turnover rates as the criterion of interest. However, from an organizational diagnosis perspective, intent to leave might be a more appropriate and actionable criterion because it provides the organization with the opportunity to address factors that may lead to future turnover.

This study should be viewed as an initial step in developing an understanding of the relationship between SBP procedures and organizational outcomes. Future studies should attempt to explore the link between motivation and procedural justice, possibly by identifying potential moderators. Additionally, future studies should explore the link between motivation and intent to leave, to assess the possibility that other factors are involved as well. Other factors, such as the perceived availability of other employment opportunities, should be studied as well.

While SBP can be a very beneficial option for many organizations, it is also important that the procedures of the SBP system should be developed using psychological principles and should be clearly and carefully defined and communicated to employees. Importantly, employee reactions (e.g., perceptions of procedural justice) to the SBP procedures should be monitored periodically in order to optimize the system through iterative improvements. While SBP systems may lead to positive outcomes in theory and research, without proper monitoring to explore how the system is being perceived and how it is impacting important outcomes, an organization does not know if the system is having the desired effect. In fact, the SBP system may inadvertently induce the negative consequences that the organization is trying to prevent.

References

- Chen, X. P., Hui, C., & Seago, D. J. (1998). The role of organizational citizenship behavior in turnover: Conceptualization and preliminary tests of key hypotheses. *Journal of Applied Psychology, 83*(6), 922-931.
- Clugston, M. (2000). The mediating effects of multidimensional commitment on job satisfaction and intent to leave. *Journal of Organizational Behavior, 21*(4), 477-486.
- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology, 86*(3), 425-445.
- Dailey, R. C., & Kirk, D. J. (1992). Distributive and procedural justice antecedent of job satisfaction and intent to turn over. *Human Relations, 45*, 305-317.
- Fryxell, G. E., & Gordon, M. E. (1989). Workplace justice and job satisfaction as predictors of satisfaction with union and management. *Academy of Management Journal, 32*, 851-866.
- Gupta, N., Ledford, G. E., Jr., Jenkins, G. D., Jr., & Doty, D. H. (1992). Survey-based prescriptions for skill-based pay. *ACA Journal, 1*(1), 50-61.
- Heneman, R. L., & Ledford, G. E. (1998). Competency pay for professionals and managers in business: a review and implications for teachers. *Journal of Personnel Assessment in Education, 12*:2, 103-121.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equations Modeling, 6*, 1-55.
- Jenkins, G. D., Ledford, G. E., Gupta, N., & Doty, H. (1992). *Survey based prescriptions for skill-based pay*. Center for Effective Organizations. University of Southern California.
- Jones, D. A., & Skarlicki, D. P. (2003). The relationship between perceptions of fairness and voluntary turnover among retail employees. *Journal of Applied Social Psychology, 33*(6), 1226-1243.
- Lance, C. E., & Vandenberg, R. J. (2002). Confirmatory factor analysis. In F. Drasgow & N. Schmitt (Eds.), *Measuring and analyzing behavior in organizations: Advances in measurement and data analysis* (pp. 221-254). San Francisco: Jossey-Bass.
- Lawler, E. E., III, Mohrman, S. A., & Ledford, G. E., Jr. (1998). *Strategies for high performance organizations*. San Francisco: Jossey-Bass.
- Ledford, G. E., Jr. (1995). Designing nimble reward systems. *Compensation and Benefits Review, 27*(4), 46-54.
- Lee, C., Law, K., & Bobko, P. (1999). The importance of justice perceptions on pay effectiveness of a skill-based pay system. *Journal of Management, 25*(6), 851-873.
- Levanthal, G. S. (1976). Fairness in social relationships. In J. W. Thibaut, J. T. Spence, & R. C. Carson (Eds.), *Contemporary Topics in Social Psychology*: 211-240. Morristown, NJ:

- General Learning Press. 17e7/952d4b8516b446a585256df8006a75f9?OpenDocument
- Mahoney, T. A. 1989. Employment compensation planning and strategy. In L. R. Gomez-Mejia (Ed.) *Compensation and Benefits* (p. 1-25). Washington, D.C.: BNA Books.
- Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, M. S. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, 43(4), 738-748.
- Millsap, R. E. (2002). Structural equation modeling: A user's guide. In F. Drasgow & N. Schmitt (Eds.), *Measuring and analyzing behavior in organizations: Advances in measurement and data analysis* (pp. 257-301). San Francisco: Jossey-Bass.
- Murray, B., & Gerhart, B. (2000). Skill-based pay and skill seeking. *Human Resource Management Review*, 10: 271-287.
- Pappalardo, J. (2005, May). Special operations command faces personnel shortages. *National Defense*. Retrieved July 5, 2005, from <http://www.nationaldefensemagazine.org>
- Roth, L. M. (2006). Because I'm worth it? Understanding inequality in a performance-based pay system. *Sociological Inquiry*, 76(1), 116-139.
- Rovira, J. D. (2003). *Importance of foreign language capabilities*. (ALMAR 072/03). Washington, DC: Author. Retrieved September 9, 2005, from <http://www.marines.mil/almars/almars2000.nsf/1babcf316f87f38c852569b80080>
- Silva, J. M., & White, L. A. (1993). Relation of cognitive aptitudes to success in foreign language training. *Military Psychology*, 5, 79-93.
- Surface, E. A., Dierdorff, E. C., & Donnelly, J. (2004, April). *Modeling second language proficiency change for US Special Operations personnel*. Poster presented at the 19th annual meeting of the Society of Industrial and Organizational Psychology, Chicago, IL.
- Swender, E. (2003). Oral proficiency testing in the real world: Answers to frequently asked questions. *Foreign Language Annals*, 36, 520-526.
- Tekleab, A. G., Bartol, K. M., & Liu, W. (2005). Is it pay levels or pay raises that matter to fairness and turnover? *Journal of Organizational Behavior*, 26, 899-921.
- Thibaut, J. & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum.
- Tremblay, M., Sire, B., & Balkin, D. B. (2000). The role of organizational justice in pay and employee benefit satisfaction, and its effects on work attitudes. *Group & Organization Management*, 25(3), 269-290.
- United States Department of Defense. (2005, February 1). A call to action for national foreign language capabilities. *Proceedings of the National Language Conference*, Retrieved April 1, 2005, http://www.nlconference.org/docs/White_Paper.pdf

Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods*, 3, 4-69.

Weber, G. (2004). English rules. *Workforce Management*, 83, 47-51.

Table 1

Descriptive Statistics and Listwise Item Correlations

	M	SD	1	2	3	4	5	6	7	8	9
1. SBP motivates me to acquire skills.	3.32	1.30									
2. SBP motivates me to maintain skills.	3.38	1.35	.89**								
3. I am motivated to succeed because of SBP.	3.42	1.22	.56**	.53**							
4. SBP procedures are fair.	2.84	1.18	.24**	.28**	.12*						
5. SBP procedures are straightforward.	3.03	1.18	.11	.15*	.03	.61**					
6. The amount of my SBP reflects my effort.	2.47	1.19	.25**	.24**	.18**	.45**	.39**				
7. I will leave the organization if I cannot get training I need.	2.26	1.18	.17**	.16**	.23**	-.21**	-.21**	-.08			
8. I have considered leaving the organization.	2.95	1.40	.25**	.26**	.30**	-.09	-.12*	-.12*	.52**		
9. I intend to leave if requirements are increased.	2.00	.99	-.04	-.04	.09	-.01	-.03	.06	.36**	.15*	
10. I am likely to re-enlist.	3.71	1.16	.07	.07	-.03	.21**	.18**	.22**	-.41**	-.24**	-.25**

Note. N = 274; * Correlation is significant at the .05 level; ** Correlation is significant at the .01 level. Items shortened for presentation. SBP = skill-based pay

Table 2

Comparison of Model Fit Statistics

	X^2	df	CFI	TLI	SRMR	RMSEA	RMSEA 90% CI
Model 1: One factor	348.50	9	0.75	0.76	0.16	0.26	[0.23 -0.28]
Model 2: Two correlated factors	29.93	8	0.98	0.97	0.04	0.07	[0.04-0.10]
Model 3: Criterion	5.16	2	0.99	0.96	0.03	0.07	[0.00- 0.14]
Model 4: Complete model	77.48	32	0.95	0.94	0.07	.07	[0.05-0.09]

Note. CFI = comparative fit index; TLI = Tucker-Lewis index (also known as the non-normed fit index); SRMR = Standardized Root Mean Residual; RMSEA = root mean square error of approximation. Fit statistics closer to 1.00 indicate better fit for the CFI and TLI (Hu & Bentler, 1999), while fit statistics less than 0.08 indicate better fit for the RMSEA (Millsap, 2002; Vandenberg & Lance, 2000) and SRMR (Hu & Bentler, 1999).

Table 3

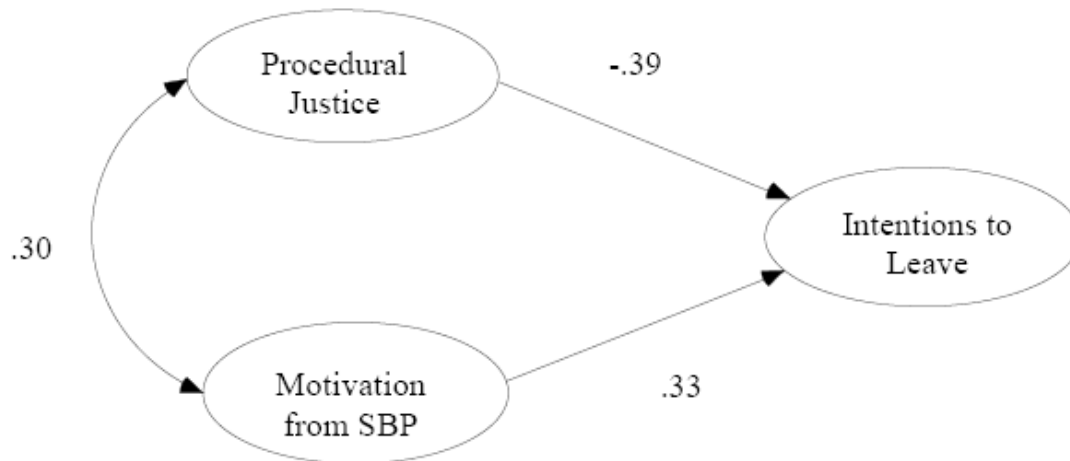
Standardized Factor Loadings for Model 4

Manifest Indicators by latent variable (summarized)	Loadings on the latent variables
<u>Motivation related to SBP</u>	
SBP motivates me to acquire skills.	.95
SBP motivates me to maintain skills.	.93
I am motivated to succeed because of SBP.	.58
<u>Procedural justice related to SBP</u>	
SBP procedures are fair.	.86
SBP procedures are straightforward.	.71
The amount of my SBP reflects my effort.	.54
<u>Intent to leave the organization</u>	
I will leave the organization if I cannot get training I need.	.93
I have considered leaving the organization.	.56
I intend to leave if requirements are increased.	.45
I intend to re-enlist in SOF.	.38

Note. SBP = skill-based pay. Items shortened for presentation. No manifest indicators were specified to load on multiple latent variables.

Figure Caption

Figure 1. Conceptual model with standardized path coefficients for Model 4



ABOUT SWA CONSULTING INC.

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- Organizational effectiveness
- Test development and validation
- Program/training evaluation
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- Selection system design
- Study and analysis related to human capital issues
- Metric development and data collection
- Advanced data analysis

One specific practice area is analytics, research, and consulting on foreign language and culture in work contexts. In this area, SWA has conducted numerous projects, including language assessment validation and psychometric research; evaluations of language training, training tools, and job aids; language and culture focused needs assessments and job analysis; and advanced analysis of language research data.

Based in Raleigh, NC, and led by Drs. Eric A. Surface and Stephen J. Ward, SWA now employs close to twenty I/O professionals at the masters and PhD levels. SWA professionals are committed to providing clients the best data and analysis with which to make solid data-driven decisions. Taking a scientist-practitioner perspective, SWA professionals conduct model-based, evidence-driven research and consulting to provide the best answers and solutions to enhance our clients' mission and business objectives. SWA has competencies in measurement, data collection, analytics, data modeling, systematic reviews, validation, and evaluation.

For more information about SWA, our projects, and our capabilities, please visit our website (www.swa-consulting.com) or contact Dr. Eric A. Surface (esurface@swa-consulting.com) or Dr. Stephen J. Ward (sward@swa-consulting.com).