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Job Satisfaction of Female and Male Superintendents: The Influence of Job Facets and Contextual Variables as Potential Predictors

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Abstract

A descriptive multiple regression approach was used to assess the job satisfaction of female and male public school superintendents taking part in a decennial survey conducted by AASA. Self-reported job satisfaction of public school superintendents was regressed on their affective reactions to specific job facets (supervision, co-workers, and compensation) and to contextual variables (type of school district, legislative mandates, and funding sources) purported to influence their job satisfaction. Results indicate that female and male superintendents were found to be similarly satisfied with their current job assignment but for different reasons as revealed by interaction terms addressed in the regression analyses.

Key Words

job satisfaction, superintendents, sex differences

Given the emphasis on high stakes testing (e.g., Nichols & Berliner, 2008) and the reduction in funding (e.g., Hanushek & Lindseth, 2009; McNeil, 2009), executive level leadership is extremely important. One factor likely to influence superintendents is their job satisfaction having implications for withdrawal (Currall, Towler, Judge, & Kohn, 2005), excessive absences (Koslowsky, Sagie, Krausz, & Singer, 1997), and ultimately job turnover (Trevor, Gerhart, & Boudreau, 1997). Consequently, our study focuses on the job satisfaction of superintendents.

Within our study, we examine the job satisfaction of female and male superintendents via two research questions. One research question concerns if female and male superintendents differ in their overall job satisfaction, and the other research question concerns if their affective reactions to different

job facets/contextual variables purported to influence job satisfaction vary by gender group. To address these research questions, we used a recent database compiled by the American Association of School Administrators (AASA) (see Author).

Literature Review

Guiding our study is a rich body of literature indicating that job satisfaction is a psychological construct (e.g., Miceli & Lane, 1991; Scarpello, Huber, & Vandenberg, 1998), varies along a single continuum (i.e. satisfaction ↔ dissatisfaction), and is influenced by various job-related factors. Based on this research, our study addressed some of the most likely factors (i.e., job facets, contextual variables, and a personal attribute) likely to influence the job satisfaction of public school superintendents (see Figure 1).

Figure 1. Potential predictors of job satisfaction for public school superintendents.



Job Facets

Specific job facets addressed in our study are supervisors, co-workers, and compensation (see Figure 1). These job facets have been noted to be important in the professional literature (Lawler, 1973) and are assessed by leading commercial instruments (e.g., *Job Descriptive Index* [nd] and *Minnesota Satisfaction Questionnaire* [nd]). Clearly, superintendents can view each job facet either as a liability or an asset having implications for their job satisfaction.

Reactions to supervisors

Supervisors of public school superintendents are school boards (Glass, Björk, & Brunner, 2000). School boards must endorse the recommendations of superintendents in many areas (e.g., policy issues, financial expenditures, and employment recommendations) and are responsible for evaluating the job performance of superintendents (Land, 2002).

However, because job satisfaction is considered as a construct influenced by several job facets, we addressed additional job facets (co-workers and compensation) likely to influence the job satisfaction of school superintendents.

Reactions to co-workers

Within the school setting, superintendents must work with a variety of co-workers, and these co-workers can be categorized into separate workgroups (Author) with each having implications for job satisfaction. The workgroups considered in our study are district level administrators, building-level administrators, teachers, and support staff. In addition to considering supervisors and co-workers, groups purported to influence the job satisfaction of superintendents, we addressed still another job facet in our study i.e., compensation (Williams, McDaniel, & Nguyen, 2006).

Reactions to compensation

Compensation has been reported to be important to employees (Terpstra & Honoree, 2003), to have implications for their quality of life (Young & Castaneda, 2008), and to be reflective of their organizational value (Gerhart & Milkovich, 1992). A superintendent's compensation is comprised of two sources: (1) annual pay and (2) fringe benefits (Author). Unique to school superintendents is that these sources of compensation are negotiated with school boards and can be an asset or a liability, either from a personal or from a public relation perspective with implications for the job satisfaction of superintendents

Contextual Factors

In addition to considering job facets (i.e., supervisors, co-workers, and compensation) noted to be mainstays in the professional literature, we addressed several contextual variables often overlooked in the existing research stream, especially for superintendents. Specific contextual variables addressed are school district type, legislative mandates, and funding sources (see Figure 1).

School district type

Although school district type could be classified as rural, suburban, or urban, we chose to use a dichotomous predictor, i.e., rural vs. non-rural. Guiding our choice is that rural school districts differ from non-rural school districts in many ways (Poppink & Schen, 2003) having implications for job satisfaction. These differences are financial resources reflected by operational budgets, labor markets for attracting superintendents as well as their co-worker groups, and compensation (pay and benefits) as employment incentives (Winter & Melloy, 2005).

Legislative mandates

Since the passage of NCLB, a metric for assessing school district outcomes within a

state (Au, 2007) has emerged, i.e., high stakes testing outcomes. This information is used to compile district report cards (e.g., Cupertino Unified School District, n.d.) serving as a barometer for gauging the performance of superintendents (Author). Because federal mandates are implemented at the state level through complementary legislation, we consider the affective reactions of superintendents according to each level of government in our study as a potential predictor of their job satisfaction.

Funding sources

A major contextual variable facing superintendents is funding for their school district, and the major sources of funds are federal grants, state monies and local contributions (King, Swanson, & Sweetland, 2003). Given that these sources of funding (see Figure 1) are based on tax revenues, each has been restricted due to the recent downturn of the US economy. Consequently, “scarce resources have required superintendents to make unpopular and painful decisions” (p. 309) likely influencing their job satisfaction.

Personal Attribute

Gender of superintendents

Results obtained in the recent study of superintendents (Author) when compared to a similar study (Glass et al., 2000) conducted a decade ago indicate an increase in the percentage of female superintendents.

However, it is largely unknown if the job satisfaction of public school superintendents varies according to gender, to specific job facets (i.e., supervisors, co-workers, and compensation), and/or to certain contextual variables (type of school district, legislative mandates, and funding source), and we considered these possibilities by assessing main effects associated with job facets and contextual variables as well as gender of superintendents by considering interaction terms in our analyses.

Consequently, within our study addressing the job satisfaction of female and male superintendents, we addressed both their overall job satisfaction and their affective reactions to potential contributors likely influencing their job satisfaction (see Figure 1) as set forth by our research questions.

Method

Population

In total, 1,867 public school superintendents responded to the most recent decennial study (Author) conducted by AASA. Collectively, these persons are representative of all states, regions, and types of school districts (see Table 2.4 in Author). However, our population is defined by 1,637 public school superintendents providing complete information for all variables, and descriptive statistics for our population are found in Table 1.

Table 1

Descriptive Statistics for Variables of Interest

Variables of Interest	Mean	Std. Deviation	N
Job Satisfaction	3.65	0.57	1637
Sex of Superintendents ¹	-0.52	0.85	1637
Reactions to School Boards	4.20	1.08	1637
Reactions to District Administrators	4.35	0.89	1637
Reactions to Building Administrators	4.56	0.76	1637
Reactions to Teachers	4.58	0.67	1637
Reactions to Support Staff	4.43	0.76	1637
Reactions to Pay	3.58	0.96	1637
Reactions to Fringe Benefits	3.57	0.94	1637
Type of School District ²	0.52	0.50	1637
Reactions to State Mandates	2.37	1.24	1637
Reactions to Federal Mandates	2.02	1.12	1637
Reactions to State Funding	2.16	1.55	1637
Reactions to Federal Funding	2.66	1.43	1637
Reaction to Local Funding	3.26	1.54	1637

Note¹: Gender was effect coded where males were coded -1 and females were coded 1.

Note²: Rural school districts coded 0 and non-rural school districts coded 1.

Procedure

Decennial studies of the superintendency since the 1920's have used field surveys to assess the affective reactions of public school superintendents. The revised instrument used in our study built on past surveys to provide continuity but included new items having contemporary implications (legislation, funding etc.). Prior to administering our survey, items were assessed using a content validity paradigm where the panel of experts (see Author for a description of the panel) included those knowledgeable about the superintendency.

Feedback obtained from the panel of experts was used to construct a final instrument. This instrument contained 159

items with some items involving multiple responses for 13 different choices. Even though the revised instrument contained 159 items spread across 27 pages requiring a substantial time commitment for those choosing to participate in the most recent decennial study, several steps were taken to encourage their participation.

Initially, superintendents received an e-mail from AASA describing the new decennial study and requesting their participation by responding via an internet survey technique. Within ensuing weeks, two additional emails were sent: (1) the second e-mail served a reminder for those failing to respond and encouraged their participation in the online survey and (2) the third e-mail requested again

their participation and provided alternative directions for downloading the questionnaire and for using U.S. mail void of an internet address. Based on these follow-up efforts, 1,637 public school superintendents provided information for those variables of interest (see Figure 1 and Table 1) addressed in our study.

Variables of Interest

Criterion variable

Our criterion variable is the self-reported job satisfaction of public school superintendents. Job satisfaction was assessed on a 4-point Likert-type scale. Anchor points on this scale include: (a) *Very Satisfied* “4”, *Moderately Satisfied* “3”, *Moderately Dissatisfied* “2”, and *Very Dissatisfied* “1”.

Predictor variables

We considered 27 predictor variables: main effects (N = 14) and certain interaction effects (N = 13). Main effects are listed in Figure 1 and include multiple job facets (i.e., supervisors [school boards], co-workers [district administrators, building administrators, compensation [pay and fringe benefits]], legislative mandates (i.e., federal and state), funding sources (i.e., federal, state, and local), type of school district (i.e., rural vs. non-rural), and a personal attribute of superintendents (i.e., gender group). For each main effect, interaction terms (N = 13) were computed according to gender of superintendents.

Because the affective reactions of superintendents can vary along a single continuum; these main effects were scored according to a five-point Likert type scale. Anchor points on this continuum are: (a) *Major Asset* “5”, *Minor Asset* “3”, *Neither an Asset nor a Liability* “3”, *Minor Liability* “2”, or *Major Liability* “1”. However, different scoring schemes were used for other variables reflected in Table 1.

School district type (i.e. rural vs. non-rural) was dummy coded (i.e., 0 or 1) with rural school districts serving as the referent group. Gender of superintendents was effect coded where males were coded -1 and females coded 1. For each interaction term involving gender of superintendents, sex of a superintendent was multiplied by each main effect.

Statistical Analyses

A descriptive multiple regression approach was used because these data reflect population parameters. Within this approach, we used a hierarchical order of variable entry involving two steps. In the first step (see Model 1 in Table 2), job satisfaction was regressed only on gender of superintendents, while in the second step (see Model 2 in Table 2) job satisfaction was regressed on all main effects as well as on interaction effects involving gender of superintendents.

Table 2

Overall Regression Equations Addressing Research Questions

Model	R	R Square
1	.016 ^a	.00
2	.330 ^b	.11

For both models, R^2 's were calculated. In the first model only gender of superintendents was considered as the sole predictor as per our first research question. Results indicate that males and females are similarly satisfied with their current job assignment, i.e., $R^2 = .00$ (see Model 1 in Table 2).

With respect to our second research question considering all potential predictors as well as interactions involving gender of

superintendents, information is provided. According to Model 2, 11% of the variance associated with the job satisfaction of superintendents can be explained (see Table 2) by this particular linear combination of variables.

Based on findings from both models, each model was deconstructed to reflect unstandardized (b) and standardized regression coefficients (B) (see Table 3).

Table 3

Deconstructed Regression Models as Per Research Questions

(Note: In all cases replace sex with gender)

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1 (Constant)	3.64	0.02	
Gender of Superintendents	-0.01	0.02	-0.02
2 (Constant)	2.50	0.13	
Sex of Superintendents ¹	0.28	0.13	0.42
Reactions to School Boards	0.09	0.02	0.16*
Reactions to District Administrators	0.01	0.02	0.02
Reactions to Building Administrators	0.04	0.02	0.05
Reactions to Teachers	0.00	0.03	0.00
Reactions to Support Staff	0.09	0.03	0.12
Reactions to Pay	0.01	0.03	0.02
Reactions to Fringe Benefits	0.02	0.03	0.03
Reactions to Type of School District ²	-0.10	0.04	-0.09
Reaction to State Mandates	0.00	0.02	0.00
Reaction to Federal Mandates	0.01	0.02	0.02
Reaction to State Funding	0.00	0.02	0.00
Reactions to Federal Funding	0.02	0.02	0.04
Reaction to Local Funding	0.01	0.01	0.03
Gender x School Boards	0.01	0.02	0.09
Gender x District Administrators	-0.02	0.02	-0.16*
Sex x Teachers	-0.07	0.03	-0.50*
Sex x Support Staff	0.05	0.03	0.34*
Sex x Pay	-0.03	0.03	-0.15*
Sex x Benefits	0.01	0.03	0.04
Sex x Type of School District	-0.04	0.04	-0.05
Sex x State Mandates	-0.02	0.02	-0.06
Sex x Federal Mandates	0.00	0.02	0.01
Sex x State Funding	0.01	0.02	0.05
Sex x Federal Funding	-0.02	0.02	-0.09
Sex x Local Funding	0.01	0.01	0.05

Note¹: Gender was effect coded where males were coded -1 and females were coded 1.

Note²: Rural school districts coded 0 and non-rural school districts coded 1.

Note*: A standardized regression coefficient $\leq .15$ was considered as important as a population parameter. Even though consideration for statistical significance is inappropriate in our study, a standardized regression coefficient $\geq .15$ would have been statistically significant if a probability sample had been used.

Because standardized regression coefficients (B) reflect the relative importance of predictor variables, it is unsurprising that B is near zero for Model 1 (i.e., $B = -.02$) that considers only gender of superintendents. With respect to the deconstructed equation involving Model 2 (see Table 3), these data provide important insights by considering main effects as well as interaction effects influencing the job satisfaction of public school superintendents.

At first glance, it would seem that main effects for gender of superintendents (i.e., $B = .42$) and for school boards (i.e., $B = .16$) should be important considerations when interpreting data found in Table 3.

When interpreting the data found in Table 3, the main effect for gender of was ignored because Darlington (1990) indicated “a variable’s average effect is often of little

interest if it interacts with other variables” (p. 331) included in the regression equation. The only main effect noted as important and failing to interact (i.e., see interaction, $B = .09$, in Table 3) with gender of superintendents is their affective reactions toward school boards. That is, those perceiving their school board as an asset are more satisfied with their current job assignment than are those perceiving their school board as a liability.

Beyond this main effect involving school boards, several interaction terms involving sex of superintendents surfaced. These interaction terms included: (a) *Gender x Teachers* (i.e., $B = -.50$), (b) *Sex x Staff* (i.e., $B = .34$), (c) *Sex by District Administrators* ($B = -.16$), and (d) *Sex by Pay* ($B = -.15$). To provide further insight about these interaction effects, separate slope coefficients were computed (see Table 4).

Table 4

Intercept and Slope Coefficients for Interaction Terms Involving Female and Male Superintendents

	Intercepts	Slopes: Sex x Teachers	Slopes: Sex x Staff	Slopes: Sex x District Administrators	Slopes: Sex x Pay
Females	2.78	-0.07	0.43	-0.01	-0.02
Males	2.22	0.07	-0.25	0.04	0.04
Differences	.52	-0.14	0.68	-0.05	-0.06

When consideration is given to different slope coefficients for female and male public school superintendents, insights are provided. Most important, these results indicated that affective reactions to support staff are more important for female (i.e., $b = .43$) than for male superintendents (i.e., $b = -.25$). On the

other hand, information contained in Table 4 indicates that the job satisfaction of male superintendents more than of female superintendents is influenced by their affective reactions to teachers (i.e., $.07$ vs. $-.07$), to pay (i.e., $.04$ vs. $-.02$) and to district administrators (i.e., $.04$ vs. $-.01$).

Discussion

Given the importance of job satisfaction (Heneman & Judge, 2006) relative to implications for organizational outcomes, research addressing this construct for public school superintendents is timely, especially as related to sex of superintendents. In the past, most superintendents have been males (Glass et al., 2000), but females have made considerable inroads (Author) and little is known about their affective reactions to their new assignments. To partially fill this void, we conducted an empirical study addressing two research questions.

Our first research question focused on the overall job satisfaction of female and male superintendents. We found both gender groups have similar levels of job satisfaction with their current job assignment (see Table 2 Model 1). Although this is important information, it fails to provide any insight as to why they might be similarly satisfied.

To address the why, our second research question considered the affective reactions of female and male superintendents to specific job facets and/or contextual variables (see Figure 1) likely to influence their overall job satisfaction. By using this two-prong approach, we found that similar job satisfaction is likely due both to a common source (i.e., reactions to school boards) and to counterbalancing perceptions about different job facets involving co-workers [district administrators, teachers, and support staff] and compensation [annual pay].

Clearly, these findings have important implications for researchers, individuals holding a superintendent position, and individuals aspiring to be a superintendent. Researchers should not overlook the notion that only those job facets noted to be important in the job satisfaction literature were found to

account for important systematic variance in job satisfaction.

Although we considered other contextual variables, as listed in Figure 1 as probable predictors, none of these variables was found to be important when consideration was afforded to job facets.

Even though our study analyzed the affective reactions for a specific population (N = 1,637) of school superintendents taking part in the most recent decennial study, these results have implications for the field at large (i.e., 12,500 see Author).

By using the unstandardized regression coefficients reported in Table 3, all superintendents can compute a personal satisfaction score based on the job facets and the contextual variables considered in our study. Thus, they can assess their current level of job satisfaction from a norm perspective involving a large, albeit restricted, population.

With respect to aspiring superintendents, our findings should be considered as important. Signaled by our findings is that aspiring females should pay special attention to support staff when choosing among school districts. For aspiring male job candidates it would be wise for them to consider teachers, district administrators, and pay because their affective post-job reactions to these variables have likely implications for their future job satisfaction.

The above recommendations should not be summarily dismissed because we found that 11% of the variance associated with the self-reported job satisfaction of public school superintendents can be accounted for by our specific combination of predictor variables. This amount of variance is by no means small when consideration is given to an effect size

measure and to the size of our population (N = 1,637). According to several authorities (e.g., Cohen, 1998; Huck, 2008), 11% is considered as a medium effect that has practical/observable implications in the field setting.

Not to be overlooked, the number of public school superintendents taking part in our

study is by no means small (N = 1,637) given informational demands for participation. That is, superintendents were requested in the most recent decennial study conducted by AASA to complete a survey containing 159 items spread across 27 pages. Certainly until additional research is conducted along these lines, our findings can serve as a benchmark for comparison.

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