



The Examination of Stress and Anxiety Levels of the Female University Administrators in Turkey *

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Abstract

This research aimed to examine the stress and anxiety levels of female administrators working in Turkish universities across various aspects. For this purpose, stress and anxiety levels were calculated, variation across administrative position, academic title, marital status, and age were analyzed. Furthermore, the relationship between stress and anxiety levels was tested. Findings derived from 177 administrators indicate that female administrators' stress levels were moderate whereas anxiety levels were low. Non-married and young participants with low managerial positions reported higher anxiety levels whereas participants with low managerial positions, academic titles, and younger ages reported higher stress levels. Moreover, stress and anxiety levels were found to be positively correlated.

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Introduction

Stress and anxiety constitute an integral part of the organizational life at universities (Chandler, Barry, and Clark, 2002). Studies indicate that there is a dramatic increase in the stress experienced by academics in recent years (Gillespie, Walsh, Winefield, Dua, and Stough, 2001). Their diverse roles as teachers, advisors, researchers, etc., create multifaceted pressures on academics (Abouserie, 1996; Gmelch, Wilke, and Lovrich, 1986). Addition of administrative duties to these roles further exacerbates the stress and anxiety experienced by academics (Gmelch and Burns, 1996). Indeed, the academics having administrative duties at their universities continuously face demands from stakeholders, and it turns out that working as an administrator with limited resources and increased workload is an increasingly stressful duty (Cloud, 1991).

Stress and anxiety in the working environment cannot be treated independently of the life outside work (Rok, 2011). With addition of gender roles such as supporting the spouse, being the family's budget director, and being in primary charge for raising children to the academic and administrative duties (Palmer and Hayman, 1993: 26) it can be argued that female university administrators will experience increased stress and anxiety. In addition, the public image of administrators further complicates the tasks of female administrators (Brown and Ralph, 1996; Weber, Feldman, and Poling, 1981). As noted by Crampton, Hodge, Mishra, and Price (1995), high-level

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management positions are traditionally perceived as "man thing" and women may face difficulties in asserting them in such positions. Likewise, a study conducted by Hart and Cress (2008) in the US found that female academics indicated that they faced greater difficulties than men in their education, research and administrative duties, and therefore, they were subject to more stress than men. Zhang (2010) reported that Chinese female academics were exposed to greater stress at work than their male colleagues as they experienced hardships in adapting the male-dominated relations and faced gender discrimination in promotions. Moreover, their family responsibilities introduced extra burden on them. Perlberg and Keinan (1986) indicated that women were supposed to assume the majority of the responsibilities at home in addition to their responsibilities at work. Gerdes (2003) argued that female academics emerged as an employee group that faced high levels of work-related stress due to their heavy career and household responsibilities. Studies found that female academics suffered from more work stress than their male colleagues in the US (Smith, Anderson, and Lovrich, 1995), the UK (Doyle and Hind, 1998), Croatia (Sliskovic and Sersic, 2011), and Israel (Perlberg and Keinan, 1986).

Rapid technological advancements, scientific inventions, population growth and economic hardships and other environmental factors that increase stress also boost anxiety experienced by individuals (Alisinanoğlu and Ulutaş, 2000). While the anxiety levels of female academics at the work environment weren't studied as extensively as their stress levels, sources of stress at the work environment are known to cause anxiety (Barnes, Harp, and Jung, 2002; Doby and Caplan, 1995). As the study findings indicated, female university administrators constitute the group that suffers from the highest level of stress among the administrators in the education sector. Consequently, it can be argued that female university administrators will face significant levels of stress and anxiety. Therefore, this study treats stress and anxiety in tandem with each other in an effort to obtain a more integrated understanding of multifaceted pressures faced by female university administrators.

Aydın (2008, 3) noted that stress is defined basically in two different approaches: by emphasizing the relationship between the individuals and his/her environment or by focusing on the reactions given by the organism in response to external demands or effects. Selye (1950) studied stress in terms of the organism's reaction to the effect and indicated that stress is the product of the relationship between the threat perceived by the body and the defense developed against it. In this context, Selye (1973) defines stress as the set of the body's indefinite reactions to environmental demands. For the author (1965) stress may emerge in cases perceived as positive or negative by the individual. Lazarus and Folkman (1984, 19) see stress as the product of the relationship between the individual and his/her environment and define it the individual's perceiving a situation that challenges him/her or goes beyond his/her capabilities in his/her relationship with his/her environment and being disturbed by it.

Stress affects employee performance. Very low levels of stress cause employees to work below their true capacities while the people working at high levels of stress make them unable to concentrate on their jobs (Crampton et al., 1995). References are made to two forms of stress as constructive stress (eustress) and destructive stress (distress). Eustress increases the worker's performance and provides the extra motivation, energy and courage required for the administrative duties (Cloud, 1991). Stears (1981) argued that medium levels of stress pave the way for individual creativity and many administrators exhibit their best performance when they have medium levels of stress (cited in Balcı, 2000, 26). Distress, on the other hand, leads to negative effects on performance such as the reluctance to go to work, secession from the organization, the sense of inadequacy, failure to cooperate, making errors at work, the urge to be estranged from the work, making inaccurate decisions, qualitative and quantitative decreases, etc. (Aydın, 2008, 95–99).

Smith and Lazarus (1990) argued that anxiety results from the individuals perceiving threats or dangers in his/her environment. Fiske and Morling (1996) indicated that anxiety emerges upon threats against basic instincts such as sufficiency, control and self-sufficiency. Anxiety can be defined as the sadness or tension resulting from the situations which creates the feeling that the person will get harmed or stress (Öktem, 1981, 3–4; Özgüven, 1994, 322–323). As defined by the American

Psychological Association (APA), anxiety is an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure (APA, 2012).

Researchers found two main components of anxiety: state and trait anxiety (Gaudry and Spielberger, 1971; Spielberger, Gorsuch, and Lushene, 1970; Zuckerman, 1976). State anxiety is variable and the product of the stress sources which affect individuals. Individuals who perceive any situation as dangerous face increased state anxiety. In cases where there are fewer sources of stress or there is no perceived threat, state stress tends to be lower (Barnes et al., 2002). Trait anxiety is characterized with worries, tense emotions and increased nervous system activity and is treated as a permanent personality characteristic. Individuals with high levels of trait anxiety perceive more threats and dangers and their state anxiety levels tend to be higher as well (Spielberger, 1972).

Başaran (1992, 237) maintained that a certain level of anxiety, like stress, increases motivation in administrators. But like any negative emotion, chronic and amplified anxiety may lead to increased disharmony in administrators. In an organization, the source of administrative power, frequent relocations, competition, lack of specific goals and duties, pressures from administrators and similar factors may constitute sources of anxiety.

The studies concerning female administrators in Turkey tended to focus on the obstacles to women's attaining higher administrative ranks (Örücü, Kılıç, and Kılıç, 2007). The studies that examined female administrators in the education field largely concentrated on the administrators in the primary and secondary education sector (Akkaş, 2001; Boydak and Akpınar, 2002; Çelikten, 2005; Turan and Ebiçlioğlu, 2002). There is a serious gap in the literature in terms of studies regarding the female education administrators in universities. For this reason, this study focused on the female educational administrators working in universities in Turkey with a view to examining stress and anxiety levels of female university administrators who are believed to constitute the group which is prone to higher levels of stress and anxiety for the foreign reasons. To this end, the study sought to find answers to the following questions:

1. What are the work stress and anxiety levels of female university administrators?
2. Do work stress and anxiety levels of female university administrators differ based on their administrative positions, academic titles, marital status and age?
3. Is there a significant correlation among the work stress and anxiety levels of female university administrators?

Method

Surveys are the studies which focus on the specific characteristics of individuals, groups or organizations (Berends, 2006, 623). This study which examines the stress and anxiety levels of female education administrators in Turkey was designed as a survey. The following information can be given regarding the working group, data collection tools, collection process and analysis.

Study Group

The study's target population consists of female rectors, deputy rectors, deans, deputy deans, institute directors, school directors, department heads, department deputy heads and division heads working in universities in Turkey. In this target universe, 800 female administrators were identified and e-mail addresses of 698 of them were accessed. Data collection tools were sent to all of the accessible addresses. However, only 173 questionnaires were sent back and the study was conducted with this working group. Two rectors, five deputy rectors, 13 deans, 42 deputy deans, three institute directors, four school directors, 66 department heads, 20 department deputy heads and 18 division heads participated in the study. There were 91 professors, 42 associate professors and 40 assistant professors among the participants of whom 121 were married and 52 were single. Of the participants, 50 were aged between 31 and 40 and 79 were aged between 41 and 50 while 44 were aged above 50.

Data Collection Tools

The stress levels of participants were measured using the 35-item Questionnaire for Stress Sources in Educational Organizations developed by Aydın (1993). This questionnaire contains questions regarding the stress sources concerning the functional and social environment of the organization. The stress sources regarding the functional environment have three dimensions, namely the duty structure aspect, the authority structure aspect and the production structure aspect. "Heavy workload" is one item from the stress sources in the functional environment. The stress sources regarding the social environment, too, have three dimensions, namely the clustering structure aspect, the role structure aspect and the culture structure aspect. "Uneasiness in the work environment" is indicated as one of the stress sources related to the social environment in the questionnaire. Participants were asked to show the level of stress specific stress sources create on them using a 5-point Likert scale (ranging between "very much" and "none"). The Cronbach's alpha internal consistency coefficient, calculated in Aydın for the entire questionnaire, is 0.87. This coefficient was found to be 0.95 in this study.

The anxiety levels of the female university administrators who participated in the study were measured using the State-Trait Anxiety Inventory (STAI) (Spielberger, 1970; Öner and Le Compte, 1983). 20 items in the state anxiety section of the inventory measure the state anxiety as described by the participant based on how they feel for the time being. One of these items is "I feel secure." The participants were asked to assess their state anxiety on a 4-point Likert scale (ranging between "very much so" and "not at all"). 20 items in the trait anxiety section measure the level of anxiety participants generally experience. For example, one of the items in the trait anxiety section of the questionnaire is "I worry too much over something that really doesn't matter." Trait anxiety items are measured using a 4-point Likert scale ranging between "almost always" and "almost never." In this study, the Cronbach's alpha internal consistency coefficients were calculated to be 0.95 and 0.78, respectively for the state anxiety and the trait anxiety.

Analysis of Data

Measurement tools were sent to the participants by e-mail and feedbacks were obtained in the same manner. The stress and anxiety levels of the participants were described using the mean and standard deviations. T-test and ANOVA test were used to make a comparison between the groups formed according to the independent variables. The Pearson Correlation analysis was used to test the relationship among the stress and anxiety scores.

Results

The stress and anxiety levels of the participants were described according to the sub-dimensions of measurement tools given in Table 1.

Table 1. Stress and Anxiety Scores

Stress Source	Dimension	\bar{X}	<i>sd</i>
Functional Environment	Duty Structure Dimension	2.39	.75
	Authority Structure Dimension	2.96	.89
	Production Structure Dimension	3.12	.93
Social Environment	Clustering Structure Dimension	2.66	1.01
	Role Structure Dimension	2.54	.91
	Culture Structure Dimension	2.19	.78
Anxiety	State Anxiety	1.71	.44
	Trait Anxiety	2.02	.29

As shown in Table 1, the female university administrators in Turkey experience stress at the low level for the duty structure aspect ($\bar{X}=2.39$) and the medium level for the authority structure ($\bar{X}=2.96$) and production structure ($\bar{X}=3.12$) aspects in the functional environment. On the other hand, the participants suffer from the medium level of stress for the clustering structure ($\bar{X}=2.66$) and role structure ($\bar{X}=2.54$) aspects and the low level of stress for the culture structure aspect ($\bar{X}=2.19$). When the average of all stress aspects was calculated, it became clear that female university administrators suffer from the medium level stress ($\bar{X}=2.64/5.00$). The sources that created highest level of stress in the participants were identified as "requirement for completing the expected duties in a short time" ($\bar{X}=3.38$) and "unfairness in assessing the personnel" ($\bar{X}=3.23$) and "uneasiness in the work environment" ($\bar{X}=3.20$).

The state anxiety levels of female university administrators were found to be very low ($=1.71/4.00$). Their state anxiety levels were relatively higher ($\bar{X}=2.02/4.00$). The highest scored state anxiety items were "I am happy" ($\bar{X}=3.01$) and "I feel rested" ($\bar{X}=2.81$), which were reverse items. The highest scored trait anxiety items were "I feel like crying" ($\bar{X}=2.95$) and "I try to avoid facing a crisis or difficulty" ($\bar{X}=2.91$).

The female administrators who participated in the study were divided into two groups in terms of their administrative duties: senior level (rectors, deputy rectors, deans, institute directors, and school directors) and normal level (department heads, department deputy heads and division heads). The t-test was conducted to identify any significant differentiation between the stress and anxiety levels of senior level and normal level female administrators. The analysis results were given in Table 2.

Table 2. Differentiation of Stress and Anxiety Levels across Administrative Duty

Stress Source	Dimension	Group	<i>df</i>	<i>T</i>	<i>p</i>
Functional Environment	Duty Structure			.030	.976
	Authority Structure			-1.123	.263
	Production Structure			-2.123	.035*
Social Environment	Clustering Structure	Senior(N=69)	171	-.740	.460
	Role Structure	/Normal(N=104)		.459	.647
	Culture Structure			-1.030	.304
Anxiety	State Anxiety			-2.206	.029*
	Trait Anxiety			-2.652	.009*

* $p < .05$

As seen in Table 2, in the production structure aspect, the stress levels of the female administrators in the senior level positions are significantly lower than those of other administrators ($t_{(171)}=-2.12$; $p < .01$). Moreover, senior level administrators were found to have significantly lower state ($t_{(171) \text{ normal}}=-2.206$; $p < .05$) and trait ($t_{(171) \text{ senior}}=-2.65$; $p < .05$) anxiety levels.

The ANOVA test was conducted to see if stress and anxiety levels of female university administrators differ depending on academic titles, and the results of this test were given in Table 3.

Table 3. Differentiation of Stress and Anxiety Levels across Academic Title

Stress Source	Dimension	<i>df</i>	<i>F</i>	<i>p</i>	<i>Differentiation</i>
Functional Environment	Duty Structure		4.693	.010*	Prof. - Asst. Prof.
	Authority Structure		.152	.859	-
	Production Structure		.351	.704	-
	Clustering Structure	2-170	.011	.989	-
Social Environment	Role Structure		1.562	.213	-
	Culture Structure		.900	.409	-
Anxiety	State Anxiety		2.454	.089	-
	Trait Anxiety		1.827	.164	-

* $p < .05$

As seen in Table 3, assistant professors experience significantly higher stress levels than professors in terms of the duty structure aspect of the functional environment ($F(2-170)=4.69$, $p < .05$). State and trait anxiety levels of female administrator do not vary significantly based on their academic titles.

The t-test was performed to find out whether stress and anxiety levels of the participants vary by their marital status and the test results were given in Table 4.

Table 4. Differentiation of Stress and Anxiety Levels across Marital Status

Stress Source	Dimension	Group	<i>df</i>	<i>T</i>	<i>p</i>
Functional Environment	Duty Structure			-.156	.876
	Authority Structure			-.029	.977
	Production Structure			.073	.942
	Clustering Structure	Married (N=121) /Not Married (N=52)	171	-.900	.369
Social Environment	Role Structure			-.524	.601
	Culture Structure			-.549	.584
Anxiety	State Anxiety			-2.335	.021*
	Trait Anxiety			-.380	.705

* $p < .05$

The stress levels of female administrators do not vary significantly based on their marital status as seen in Table 4. On the other hand, the state anxiety levels of married administrators are significantly lower than single ones ($t_{(171)}=-2.335$; $p < .05$).

The ANOVA test was conducted to find out if the scores obtained from the sub-dimensions of the stress sources scale vary depending on the ages of female administrators. The analysis results were given in Table 5.

Table 5. Differentiation of Stress and Anxiety Levels across Age

Stress Source	Dimension	<i>df</i>	<i>F</i>	<i>p</i>	<i>Differentiation</i>
Functional Environment	Duty Structure	2-170	3.117	.047*	31-40/51 and above
	Authority Structure		1.212	.300	-
	Production Structure		1.322	.269	-
Social Environment	Clustering Structure		2.109	.125	-
	Role Structure		.844	.432	-
	Culture Structure		1.596	.206	-
Anxiety	State Anxiety	4.071	.019*	31-40/51 and above	
	Trait Anxiety	.927	.398	-	

* $p < .05$

As seen in Table 5, the female administrators aged between 31 and 40 suffer from the significantly higher levels of stress than the administrators aged 51 and above in the duty structure of the functional environment [$F_{(2-170)} = 3.12, p < .05$]. Likewise, the female administrators aged between 31 and 40 have significantly higher levels of state anxiety than the administrators aged 51 and above [$F_{(2-170)} = 4.07, p < .05$].

The Pearson Correlation analysis was used to determine if there is a significant correlation between the stress and anxiety levels of the participants. The results were given in Table 6.

Table 6. The Relationship between Stress and Anxiety Levels

Variables	1	2	3	4	5	6	7	\bar{X}	<i>sd</i>
1. Duty Structure								21.53	6.71
2. Authority Structure	.67**							23.69	7.12
3. Production Structure	.63**	.80**						15.64	4.65
4. Clustering Structure	.49**	.74**	.68**					18.65	7.06
5. Role Structure	.48**	.61**	.54**	.64**				5.08	1.83
6. Culture Structure	.62**	.72**	.65**	.70**	.63**			8.76	3.11
7. State Anxiety	.29**	.33**	.34**	.26**	.26**	.33**		34.23	8.79
8. Trait Anxiety	.09	.22**	.27**	.22**	.24**	.31**	.56**	40.42	5.82

** $p < .01$

As seen in Table 6, no significant correlation was found between stress and trait anxiety in the duty structure aspect of the functional environment while the stress levels were found to be significantly and positively correlated both to state and trait anxiety levels in all other aspects. In other words, female university administrators tend to experience increased levels of anxiety in response to rising stress levels in the work environment.

Discussion, Conclusion and Suggestions

Female university administrators generally suffer from medium levels of stress. The requirement completing the expected duties in a short time is the main source of stress for female administrators. Perlberg and Keinan (1986) found that the main sources of stress in academics in Israel were the failure to find sufficient time for monitoring the developments in the field, high expectations and administrative duties. In a study conducted in the US, Gmelch, Lovrich, and Wilke (1984) concluded that the sources of stress in universities were largely about limitations about time and sources. The results of a study performed by Gillespie et al. (2001) in Australia suggest that extreme workload is one of the major sources of stress for academics. The studies conducted in Turkey produced similar results. Balcı (2000, 83) found that workload is one of the leading stress sources for university lecturers. As noted by Özer (2011), lecturers face heavy teaching responsibilities at associate, graduate and postgraduate degrees and as a result of this, they fail to find sufficient time for research and publication. Lecturers are expected to perform consultancy duties and participate in activities for raising the awareness of the public, in addition to their teaching and research responsibilities. Administrative duties imposed on them by their universities or faculties as well as their membership to jury committees for master's, doctor's and associate professor's degrees constitute the workload of academics. Given the administrative duties and family responsibilities, the female university administrators' seeing time constraints as the most important source of stress is quite understandable.

Other factors that created highest level of stress in the participants were unfairness in assessing the personnel and uneasiness in the work environment. In a US study, Gmelch and Burns (1993) found confrontation with colleagues as the most important source of stress for the academics who had administrative duties. Based on the results of a study conducted in Sweden, Broadbridge (2000) reported that female administrators suffer from extremely high levels of stress in terms of interpersonal relations. One reason for this may be the negative attitudes adopted by the people who are in working relationship with female administrators toward female administrators. According to the findings of a study by Dietz (1997) on female education administrators (with titles as deans and above) working at US universities, female university administrators are not fully accepted or tolerated in the male-dominated culture. For instance, the errors by female university administrators are less tolerated compared to those by men. This study found this attitude toward female administrators as the source of uneasiness in the working environment, which is one of highest stress-producing factors for women with administrative duties.

While trait anxiety levels of female administrators tended to be higher compared to their state anxiety levels, both state and trait anxiety levels were found to be very low. The findings from the state anxiety scale indicate that female university administrators do not have a happy mood and feel themselves exhausted. It can be argued that this may be the result of the above-mentioned heavy workload. The data from the trait anxiety scale imply that the participants have a fragile constitution and tend to avoid troublesome or challenging situations. These findings can be explained with reference to the emotional personality nature (Shields, 2000) which is largely attributed to women. Organizational obstacles such as the female administrators' failing to obtain as much acceptance as their male colleagues, as noted in Dietz (1997), may be triggering anxiety for women.

At senior management levels, female university administrators were found to face less stress and anxiety in the production aspect of the functional environment. These findings comply with the literature. Crampton et al. (1995) reported med-level administrators experience higher levels of stress. Winefield and Jarett (2001) indicated that department heads suffer from higher levels of state anxiety than deans. It can be suggested that female administrators with senior level management duties tend to experience lower levels of stress and anxiety as they can act more independently in decision-making processes. In addition, women with senior level administrative duties tend to have fewer superiors to whom they are accountable and this may play a role in their experiencing less stress and anxiety.

It was found that assistant professors suffer much stress than professors in the duty structure aspect of the functional environment. The questions in this aspect were related to lengthy working hours, insufficient wages, etc. Working conditions and economic rights of academics improve by title. This explains why assistant professors tend to experience higher levels of stress in this aspect. Studies suggested that stress decreases as the academic title increases (Abouserie, 1996; Gmelch et al., 1986; Sliskovic and Sersic, 2011). In harmony with these studies, Tytherleigh, Webb, Cooper, and Ricketts (2005) reported that lack of employment guarantee is the most important source of stress for academics. In Turkey, assistant professors are employed on a permanent basis and their appointments are made at certain intervals.

No significant difference was found between the stress levels of female university administrators based on their marital status. On the other hand, unmarried participants were found to suffer from higher state anxiety compared to married ones. However, studies indicated that female education administrators experience higher stress due to addition of family responsibilities upon marriage (Gerdes, 2003; Palmer and Hayman, 1993; Zhang, 2010). In this regard, it can be said that this study produced results contrary to expectations. On the other hand, it is hard to assert that household responsibilities attributed to women are solely restricted to marriage. Unmarried women, too, are expected to assume a number of responsibilities at home. For this reason, future research may choose to ask if household responsibilities have any effect on their work instead of inquiring if they are married or not.

As regards the duty structure aspect of the functional environment, young female administrators tend to experience significantly higher levels of stress compared to older administrators. At the same time, young female university administrators have higher state anxiety levels as well. In the same vein, Winefield and Jarett (2001) found young female academics have higher levels of stress and state anxiety than experienced academics. In a Canada study, Thorsen (1996) reported that older academics suffer from higher work-related stress compared to younger academics. As this finding of the study, also backed by the literature, is being discussed, the duty and title variables should be taken into consideration. Indeed, while this may not always be the case, as the age of academics increases, the likelihood of their attaining higher titles and more senior positions increases as well. Therefore, it may be assumed that younger academics (aged between 31 and 40 in this study) would tend to be assistant professors in general and the above-mentioned discussion regarding the factors causing stress and anxiety in assistant professors should apply to this finding as well.

As shown in the analysis based on variables of administrative task, academic title and age, young female academics who have low level administrative tasks and who have just started to climb the career ladder tend to experience higher levels of stress and anxiety. For this reason, this group should be given priority in the organizational plans that are designed to combat work-related stress and anxiety for academic members. O'Brien and Janssen (2005) propose an internship system that helps female university administrators to overcome the problems related to their administrative duties. Such a system may ensure that female university administrators receive systematic assistance from experienced administrators in Turkey. In this way, the problems and uncertainties faced young female university administrators may decrease. Any decrease these problems and uncertainties may minimize the stress and anxiety experienced by female administrators.

It was found that the level by which female university administrators are affected by stress sources is positively correlated to both state and trait anxiety in all aspects other than the duty structure aspect of the functional environment. As the stress levels of female university administrators increase, their state and trait anxiety levels increase as well. This finding can also be construed to imply that any decrease in stress will lead to a fall in the anxiety levels. In the literature, it was reported that anxiety rises up at times of increase stress and falls down in response to declining stress levels (Alisinanođlu and Ulutaş, 2000; Öner and Le Compte, 1985; Özgüven, 1994; Spielberger, 1972). In this regard, this study's findings are in compliance with the literature. This correlation between the work-related stress and anxiety is an important starting point for the work for combating stress and anxiety. Any program that is designed to combat stress and anxiety levels of female university administrators should treat these two variables in conjunction with each other. For instance, sources of stress should be taken into consideration in examining the factors causing anxiety in the working environment. Thus, a more integrated perspective may be achieved.

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