Job performance as a mediator between affective states and job satisfaction: A multigroup analysis based on gender in an academic environment

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Abstract

This study focuses on examining the mediating effect of job performance on the relationships between positive and negative affective states with job satisfaction of academics in Malaysian universities and colleges. Additionally, addressing organizational diversity, a gender comparison analysis was performed to extend the results. Data were collected from 2337 academics and Partial Least Squares (PLS-SEM) method was applied to analyze the data. The results revealed that the impacts of positive and negative affect on job satisfaction were meaningful. Also, empirical evidence was only found for the mediating role of job performance on the relationship between positive affect and job satisfaction. Lastly, the permutation-based multigroup analysis showed a significant difference between male and female academics with respect to the positive affect-job satisfaction linkage. Implications and future directions were elaborated.

Keywords Affective Events Theory (AET) · Job satisfaction · Job performance · Malaysian higher education · Gender

Introduction

Higher education contributes significantly to society through training scholars and equipping them with essential knowledge and skills to leave an impact on the society and opt for positive changes. In line with that, due to their wide scope of job descriptions, academicians play a salient role in higher education to hit national development targets. However, universities around the world have witnessed major challenges, turnarounds and transformations within the higher education industry too (Ghasemy et al. 2018b). Among these change forces faced by higher education institutions, issues such as internationalization and globalization in higher education (Rostan and Ceravolo 2015), wide utilization of information technology in academic context (Scott et al. 2012), and the new fundraising approaches in higher education (Teixeira and Koryakina 2013) appear to be among the trending issues. Therefore, given the constantly shifting higher education environment and confronting with emerging challenges, it is vital to examine academics' attitudes and behaviors to ensure their happiness at workplaces (Okpara et al. 2005) and increase their productivity. For this reason, the physical and mental wellbeing of academicians have garnered the attention of scholars.

The review of the literature identifies a wide range of predictors for job satisfaction (Bozeman and Gaughan 2011; Machado-Taylor et al. 2016) and job performance (Ghasemy et al. 2018a; Scott et al. 2012) in academic settings. In addition, from a psychological perspective, both negative and positive affect have been emphasized as the determinants of job performance and job satisfaction at workplaces (Weiss and Cropanzano 1996). These negative and positive affective states, which fluctuate over time, provide an environment for the academicians to work as the content and happy employees or hopeless and unhappy academic staff.

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Even though the topic of positive and negative emotions in organizational research has not grabbed as much attention as job satisfaction has, research in this area has gained distinction due to the emergence of new theories and the development of new instruments (Whitman et al. 2010). For instance, one of the considerable research findings indicated overwhelming evidence demonstrating how positive affect contribute to various personal and professional outcomes (Hu and Kaplan 2015). This finding was consistent with findings of Cerci and Dumludag (2019) who, guided by Affective Events Theory (AET) (Weiss and Cropanzano 1996), found empirical evidence for the strong linkages between life satisfaction and job satisfaction in the academic ecosystem with factors such as mobbing, time for research, formal/ informal pressure, and subjective job security. In another study in the Malaysian higher education (Abdul Karim 2008), evidence was found for the correlation between librarians' job satisfaction and other organizational variables namely, job independence, affective commitment, job performance feedback, organizational tenure, role clarity, and role conflict. In addition, linking emotions with attitudes such as job satisfaction, Glasø et al. (2011) suggested that negative emotional experiences such as bullying at the workplace can result in low job satisfaction and eventually make the employees leave their jobs, as a judgment-driven behavior (Weiss and Cropanzano 1996). In the same vein, and mainly in the higher education context, positive faculty perceptions and institutional environment would significantly contribute to the faculty members' job satisfaction (Webber 2018).

It is noticeable that not only organizational variables have been scrutinized with respect to their impacts on outcomes such as job satisfaction and job performance, demographic factors (e.g. gender) which address the issue of organizational diversity within different organizational domains (Schermerhorn et al. 2010), have been remarkably considered by the researchers (Janssen and Backes-Gellner 2016; Wilson 2016). More specifically, gender has been viewed as a significant factor in influencing job satisfaction (Cerci and Dumludag 2019). In alignment with this, there are some studies demonstrating that male faculty members are generally more satisfied than female faculty members, especially with respect to the benefits and salary that they receive (Bilimoria et al. 2006; Callister 2006; Settles et al. 2006). However, Sabharwal and Corley (2009), looking at differences in job satisfaction across disciplines and gender, came up with a contradictory finding. In their study, although female faculty members earned less than male faculty members, their overall job satisfaction level was higher due to the intrinsic factors leading to the contentment among the female. Moreover, while there are some debates which suggest that male and female seek for different values at workplaces that result in different levels of job satisfaction and job performance, Sloane and Ward (2001) did not find gender as a determining

factor in overall job satisfaction among academicians in Scottish higher education due to the equality of job expectations between the male and the female.

This said, it is evident that there are controversies over the issue of the impact of gender on job satisfaction. In addition, as highlighted by Schermerhorn et al. (2010), while job satisfaction and job performance have been two main organizational outcomes, the direction of the relationship between them is not much clear though the direction from job performance to job satisfaction appears to be more justifiable. Moreover, whereas a scarce number of studies were identified focusing on affective states and their influences on job performance and job satisfaction of academics in higher education ecosystems, the analytical approaches in examining these effects in the context of other disciplines were not as sound as expected, thereby posing a methodological gap in this area. To address these issues and guided by AET (Weiss and Cropanzano 1996), the purpose of the study in hand is to examine the degree to which positive and negative affective states influence job satisfaction of male and female academics in Malaysian universities and colleges. Additionally, this study investigates the mediating role of job performance on the linkages between affective states with job satisfaction. What is more, to address organizational diversity and the highlighted controversies in this area in higher education research, gender has been taken into account in order to extend the results since group composition (identifying differences based on gender in our study) can enrich the analysis with further particularized findings, conclusions and implications (Hair et al. 2019) in Malaysian context. In other words, this study seeks to find the differences between female and male lecturers based on the proposed literature-driven and theoretically supported model so that policymakers and the main role players in higher education may be able to help establish emotionally safe and productive universities.

Notably, the issues of job satisfaction and at-home affect link are considerably important since employees struggle with work-life balance in today's high-tech and always-connected environments (Schermerhorn et al. 2010), specifically in the shifting and competing higher education environment, providing a more substantial rationale for undertaking this research work. In addition, the examination of the impact of employees' affective reactions on workplace situations has been an important and promising area of social research (Porath and Pearson 2012). Lastly, it should be highlighted that there is evidence for the relationship between some forms of job dissatisfaction and counterproductive work behaviors that aim at purposely disrupting relationships, organizational culture or performance in the workplace (Dalal 2005), thus warranting this study focusing on job performance and job satisfaction of academics.

Theoretical Framework

To investigate the impact of positive and negative affect on job performance and job satisfaction, this study largely benefited from AET. Initially, AET was pioneered by Weiss and Cropanzano (1996), as illustrated in Fig. 1, with the primary notion that work events, either related to people or situations, can influence emotions and moods which subsequently result in affect-driven behaviors (i.e., job performance) and attitudes (i.e., job satisfaction). Additionally, the theory argues that dispositions moderate the relationship between work events and affective reactions and attitudes are viewed as the main causes of judgement-driven behaviors.

As elaborated by Watson et al. (1988), negative affect reflect emotions subsuming a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness while enthusiasm, inspiration and appreciation are some examples of positive affect. Additionally, job satisfaction, as an attitude, has been defined as a positive or negative evaluative judgment of one's job or job situation (Weiss and Cropanzano 1996) and job performance, as an affect-driven behavior (Weiss and Cropanzano 1996), is seen as a means to reach a goal or set of goals within a job, role, or organization (Campbell 1990). It is noteworthy that while job satisfaction does not capture affective experiences, these experiences or reactions are helpful in determining the overall attitude (Weiss and Beal 2005).

Despite AET considers affective events intra-organizational, Ashton-James and Ashkanasy (2005) proposed that affective events can be inter-organizational as well and can be prompted by external factors such as stock market, foreign exchange fluctuations and many other external factors which can ultimately influence employees' organizational attitudes and behaviors.

Figure 2 illustrates the conceptual framework of this study that has been developed based on AET. Particularly, given the complexity of the macrostructure of AET as evidenced by the number of constructs and linkages, we focused on the casual linkages among affective states, job performance (an affect-driven behavior), and job satisfaction (an attitude). In addition,

due to the controversies over the direction of the relationship between job performance and job satisfaction (Judge et al. 2001; Schermerhorn et al. 2010), this effect was added to the model. More specifically, this causal effect running from job performance to job satisfaction was in alignment with the previous organizational behavior research studies as it generally makes sense that when the employees perform well, they should feel good and be satisfied with their jobs (Schermerhorn et al. 2010). Moreover, while the impact of gender on the entire model has been demonstrated as a non-directional hypothesis, we controlled for three binary variables namely, experience outside higher education, nationality, and marital status and estimated their effects on job satisfaction to increase the accuracy of the results and address the issue of endogeneity (Hult et al. 2018). As advised by Bernerth and Aguinis (2016), we considered these control variables since they appeared to be integral to our model based on their relevancy to the Malaysian higher education landscape and could be reliably measured.

The conceptual framework, in line with previous research studies such as Fisher (2000, 2002), demonstrates that both positive and negative affective states have impacts on job satisfaction. Particularly, the relationship between positive affect and job satisfaction is positive (Webber 2018) and the relationship between negative affect and job satisfaction is negative (Glasø et al. 2011). Moreover, Judge et al. (2006) found evidence for the positive influence of the perception of interpersonal justice and negative impact of state hostility on job satisfaction.

> H1: Positive affect increase job satisfaction while controlling for selected demographic factors.
> H2: Negative affect decrease job satisfaction while controlling for selected demographic factors.

In the same vein and as quoted by Zagelmeyer et al. (2018), there is increasing literature in the context of work and workplaces focusing on the influence of emotions on cognitions, attitudes, and behaviors (Elfenbein 2007). For instance, Li et al. (2018) in their study in the context of medical centers

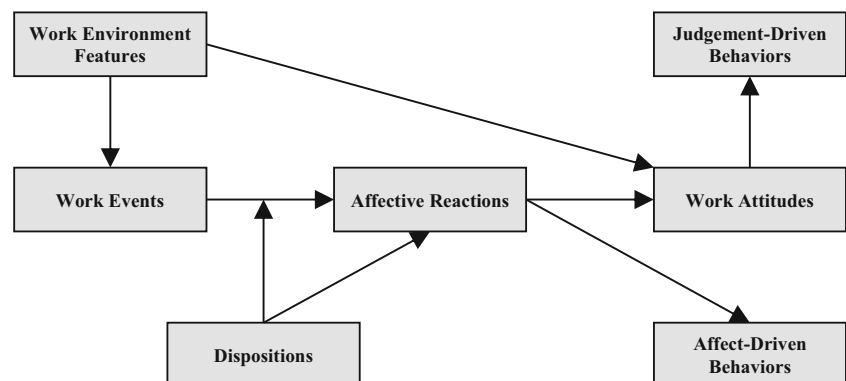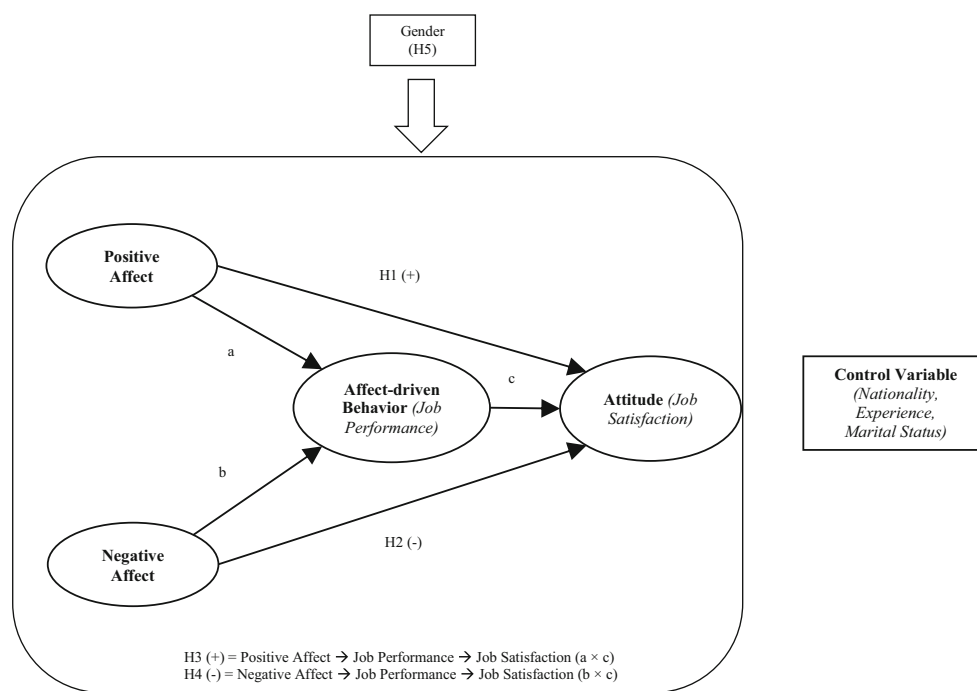**Fig. 1** Affective Events Theory or AET (Weiss and Cropanzano 1996)

Fig. 2 Conceptual framework

examined the negative influence of violence in emergency departments on outcomes namely, nurses' leave intention and avoidance behaviors, albeit through negative affect. In addition, Ayoko and Härtel (2003) found evidence for the relationship between bullying emotions and counterproductive behaviors. As another example, Atkinson et al. (2018) found support for the relationship between psychological contract breach, as a work event, and specific organizational citizenship behaviors, as affect-driven behaviors, mediated by the feelings of violation and the reassessment of relational contracts. Given that job performance is viewed as an affect-driven behavior (Weiss and Beal 2005) and the considerable evidence for the contribution of job performance to job satisfaction (Christen et al. 2006; Judge et al. 2001; Schermerhorn et al. 2010) it may be hypothesized that job performance plays the role of the mediator between affective states and job satisfaction, as presented in the conceptual framework.

H3: Job performance positively mediates the relationship between positive affect and job satisfaction while controlling for selected demographic factors.

H4: Job performance negatively mediates the relationship between negative affect and job satisfaction while controlling for selected demographic factors.

Lastly, the relationship between job satisfaction and gender has long been in focus in higher education research (August and Waltman 2004; Bilimoria et al. 2006; de Lourdes Machado-Taylor et al. 2016; Oshagbemi 1997, 2000; Ropers-Huilman 2000; Settles et al. 2006). While some studies have found higher levels of job satisfaction for male academics (Bilimoria et al. 2006; Callister 2006;

Settles et al. 2006), there is contradictory evidences that the female academics are more satisfied (Okpara et al. 2005; Oshagbemi 1997). Moreover, there are other studies which have concluded equality of job satisfaction between male and female academics (Ward and Sloane 2000). Besides the contradictory findings with respect to the impact of gender on job satisfaction, the effect of gender on various work aspects (Cohn 2019) and the strong theoretical discussions on its role in organizations (Ely and Meyerson 2000) were the main reasons for the development of H5. Importantly, we considered a multigroup analysis to provide more insights into the impact of gender on the linkages within the entire proposed model.

H5. There is a difference between male and female academics in terms of the entire proposed model while controlling for selected demographic factors.

H5a: There is a difference between male and female academics in terms of the relationship between positive affect and job satisfaction while controlling for selected demographic factors.

H5b: There is a difference between male and female academics in terms of the relationship between negative affect and job satisfaction while controlling for selected demographic factors.

H5c: There is a difference between male and female academics in terms of the relationship between positive affect and job satisfaction through job performance while controlling for selected demographic factors.

H5d: There is a difference between male and female academics in terms of the relationship between negative

affect and job satisfaction through job performance while controlling for selected demographic factors.

Method

Research Design

This study is purely quantitative in nature. More specifically, it is a cross-sectional survey design study that is underpinned by the post-positivism worldview assumptions (Creswell 2012) and focuses on Malaysian academics' affective states, behaviors, and attitudes.

Analytic Procedure

Following the guidelines proposed by Henseler (2018), since the study was predictive-explanatory, Partial Least Squares Structural Equation Modeling (PLS-SEM) was selected as the method of analysis. Particularly, the prediction errors, predictive relevance of the effects, endogenous variables' R^2, the statistical inference of path coefficients, and effect sizes were mainly in focus. The selection of the method was due to four reasons namely, testing a theoretical framework from a prediction perspective, increasing complexity by exploring theoretical extensions of established theories, the existence of composites within the model estimated in Mode A (Cepeda-Carrión et al. 2019; Hair et al. 2019) and mediator analysis (Hair et al. 2017). Notably, PLS-SEM is a recommended approach in mediator analysis since it is based on the bootstrapping procedure which makes no assumption about the shape of the variables' distribution and is capable of being more confidently applied to small sample sizes (Hair et al. 2017).

Lastly, SmartPLS 3 software package was employed (Ringle et al. 2015) to evaluate all the reflective measurement models, also known as Mode A measurement models (Hair et al. 2017), as well as the structural model.

Participants

The participants are the academicians working in institutions of higher learning in Malaysia. While the Malaysian higher education system has clearly categorized the higher education institutions into public and private, as they are controlled differently by different rules and regulations, they have been viewed as integral parts of higher education system rather than being considered as opponents (Wan et al. 2015). Additionally, based on the statistics published by the Ministry of Education Malaysia and Malaysian Qualification Agency in 2019, there are 5 public research universities, 4 public comprehensive universities, 11 public focused universities, 34 public polytechnics, 227 public community colleges, 82 private universities, 42 private university colleges, and 396 private colleges in Malaysian higher education sector. It is noteworthy that the data were collected randomly via an online data collection and management platform.

Measures and Covariates

In this study, data for positive and negative affective states were collected using the Positive and Negative Affect Schedule, or PANAS, (Watson et al. 1988). This scale consists of 20 words that describe different feelings and emotions such as determined, excited, scared, and upset. The respondents were asked to describe how they felt at work on the average based on a 5-point Likert scale from 1 (very slightly) to 5 (extremely).

With respect to job performance, the scale developed by Miller and Cardy (2000) was employed to collect data. This scale contained of 9 items that did not refer to any job-specific performance behaviors, thus were applicable in diverse organizations such as university domains. It is noteworthy that the items of this scale were converted from third-person voice to first-person voice. Example items are "I complete work in a timely and effective manner" and "When I want to reach a goal, I am usually able to succeed". The respondents were asked to rate each item on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Job satisfaction was operationalized using the 10-item generic job satisfaction scale developed by Macdonald and MacIntyre (1997). It is noticeable that the term "company" in one of the items changed to "institution". The sample items are "I feel close to the people at work", "I feel good about my job", and "All my talents and skills are used at work" and the respondents rated the items using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Given that the study is predictive-explanatory and to address the issue of endogeneity (Hult et al. 2018), three control variables namely, marital status (married and single), nationality (local and international), and having experiences outside higher education (yes and no) were added to the proposed model. Notably, the section of marital status and work experience was due to their considerable usage in many social sciences research studies (Bernerth and Aguinis 2016). Additionally, we considered nationality as the third control variable as there have been 4462 international academic staff working in Malaysian higher education sector based on the 2018 statistics published by the Ministry of Education Malaysia.

Sampling Procedures and Sample Size

We created a database of 31,493 email addresses of the academics in Malaysian higher education, as the target population

of this study, and used it as the input for SurveyMonkey online survey administration platform. We also added a covering page containing guidelines on how to complete the survey and ethical issues such as respecting the privacy of the respondents as well as the voluntariness nature of the study. The survey was distributed and overall, 2455 surveys were received through a simple random sampling method (Response Rate = 7.7%) of which, 114 surveys had been partially completed and removed from the data. Since there were less than 5% values missing per indicator (Hair et al. 2017) in our final data, they were dealt with through replacement with the median of all nearby points. Notably, as highlighted by Tabachnick and Fidell (2013), when only a few data points (≤5%) are missing in a random pattern and the dataset is large, the problems related to the missing data treatment are less serious and almost any procedure for predicting and replacing missing values results in similar statistics. Next, two items of job performance were reverse-coded to make them consistent with other items of that scale. In addition, the computation of squared Mahalanobis distance to detect multivariate outliers (Byrne 2016) revealed the presence of 4 extreme outlying cases that were excluded from the dataset. The removal of the outlying cases was mainly due to the fact that they were considerably different from other cases as well as their potential influence on the findings (Hair et al. 2017). The demographic profile of the 2337 Malaysian academics, as the final sample in our study, has been shown in the ensuing Table 1.

Common Method Bias

Arguably, as quoted by Ali et al. (2018), there is disagreement with respect to the applicability of Common Method Bias (CMB) in the context of PLS-SEM and this issue is not a main concern in PLS-SEM applications. However, given the existence of behavioral constructs within the proposed model, the recent method of full collinearity assessment (Kock 2015; Kock and Lynn 2012) was adopted to detect potential CMB situations. Specifically, CMB is undesirable since it is caused by the measurement method rather than by the network of causes and effects in the model under scrutiny in the context of PLS-SEM (Kock 2015). According to Kock (2015), when a Variance Inflation Factor (VIF) achieves a value greater than 3.3, it is viewed as an indication of pathological collinearity, warning that the model being contaminated by CMB.

Table 2 summarizes the results of full collinearity assessment, indicating no cause for concern in this regard.

Results

To analyze the data, guidelines proposed by Hair et al. (2019) and Shmueli et al. (2019) were followed to evaluate the composites estimated in Mode A, the structural model, and the

Table 1 Demographic Profile of the respondents (N = 2337)

Gender	Frequency	Percent
Male	890	38.1
Female	1447	61.9
Age	Frequency	Percent
Below 30	95	4.1
31 to 40	996	42.6
41 to 50	799	34.2
51 to 60	364	15.6
Over 60	83	3.6
Marital Status	Frequency	Percent
Single	455	19.5
Married	1882	80.5
Background	Frequency	Percent
Science	578	24.7
Social Science	999	42.7
Engineering	504	21.6
Medical and Dental	256	11.0
University Type	Frequency	Percent
Public University	1777	76.0
Public Polytechnic	235	10.1
Private University	246	10.5
Private University College	79	3.4

out-of-sample predictive performance of the model. In addition, the results of the analysis were extended through testing measurement model invariance via Measurement Invariance of Composite Models (MICOM) approach (Henseler et al. 2016), followed by running a permutation-based multigroup analysis (Hair et al. 2018) to detect gender differences based on the linkages within the entire model.

Assessment of the Measurement Models

The first step in evaluating reflective measurement models or the composites estimated in Mode A was to assess the reliability of the items by examining composites' loadings or correlation weights (Hair et al. 2018). As highlighted by Hair et al. (2019), a loading above 0.708 is recommended for each indicator as it ensures that the item communality is above 0.5 (Hair et al. 2017) and in other words, the construct explains more than 50% of the indicator's variance. Following this guiding principle, non-contributing items were dropped from all the scales.

The second step was to evaluate internal consistency reliability. For this purpose, Cronbach's alpha, as a too conservative estimate of reliability, and Composite Reliability (CR), as a too liberal measure to estimate reliability, were considered (Hair et al. 2017; Hair et al. 2019). In addition, the newly introduced measure known as Rho_A (Dijkstra and Henseler

Table 2 Full collinearity VIFs

Variables	Positive Affect	Negative Affect	Satisfaction	Performance	Experience	Nationality	Marital status
VIF	1.874	1.341	1.946	1.266	1.021	1.018	1.031

2015), was estimated. As elaborated by Hair et al. (2019), the reliability estimates should fall between 0.7 and 0.95.

Next, convergent validity was assessed through evaluation of the Average Variance Extracted (AVE) metric, which should be above 0.5, as the indication of the establishment of this type of validity (Hair et al. 2017; Hair et al. 2019).

Table 3 displays the results of examining loadings, reliability estimates and AVE. As displayed in Table 3, all the loadings were above 0.708, reliability estimates were within the accepted ranges, and AVEs were above 0.5. This implied the establishment of indicator reliability, internal consistency reliability, and convergent validity based on the latest guidelines proposed by Hair et al. (2019). Additionally, descriptive statistics with respect to the items have been displayed in Appendix 1. Table 10.

The last step in evaluating measurement models was to assess discriminant validity (Hair et al. 2019). For this purpose, the Heterotrait-Monotrait or HTMT (Henseler et al. 2015) and Fornell-Larcker (Fornell and Larcker 1981) criteria were applied. Typically, for conceptually similar constructs, HTMT values above 0.9 would suggest the lack of discriminant validity between the constructs and with respect to the conceptually distinct constructs, HTMT values less than 0.85 are the indications of discriminant validity (Henseler et al.

2015). Regarding Fornell-Larcker criterion, the square root of the AVE value of each construct should be greater than its correlation with other constructs. As displayed in Table 4, all the HTMT values were less than 0.85, implying the establishment of discriminant validity based on $HTMT_{0.85}$ criterion. In addition, all the correlations were smaller than the square root of AVEs, thereby suggesting discriminant validity based on Fornell-Larcker criterion.

Assessment of the Structural Model

Structural model evaluation involves assessing collinearity among the exogenous constructs, testing the significance and relevance of path coefficients as well as indirect effects and total effects (if needed), examining model's predictive accuracy followed by assessing model's out-of-sample predictive power, and model comparison, if necessary (Hair et al. 2019).

To assess collinearity among the constructs, VIF values of the exogenous construct were focused. Notably, while VIF values should not be greater than 5, values less than 3 are viewed as ideal values (Hair et al. 2019). The initial examination of VIF values showed that all the values were ideally less than 2, indicating no cause for concern with respect to collinearity issues.

Next, given the direction of the hypotheses, a one-tailed test of bootstrapping routine at 5% significance level and with 10,000 bootstrapping subsamples was run (Streukens and Leroi-Werelds 2016) to check the significance of the paths. With respect to the impact of control variables on job satisfaction, a two-tailed test of bootstrapping routine at a 5% significance level with the same number of subsamples was considered. In addition, in line with the new recommendations by Aguirre-Urreta and Rönkkö (2018) in terms of statistical inference using bootstrapped confidence intervals, percentile confidence intervals were examined in this analysis.

The results of significance testing of path coefficients (direct effects), R^2 values known as explanatory power (Shmueli and Koppius 2011), percentile confidence intervals, R^2 decomposition values, along with the f^2 values of the exogenous constructs on R^2 values have been displayed in Table 5.

As displayed in Table 5, focusing on job satisfaction, the size of the effect of positive affect on this construct was the biggest in comparison with other exogenous constructs linked to it. In addition, both H1 (+) and H2 (−) were supported empirically. It is important to highlight that while the effect of job performance on job satisfaction was significant, it did

Table 3 Loadings, reliability estimates, and convergent validity

Construct	Item	Loading	Alpha	Rho_A	CR	AVE
Negative affect	NA2	0.825	0.884	0.891	0.915	0.683
	NA4	0.801				
	NA6	0.840				
	NA7	0.830				
	NA9	0.833				
Positive affect	PA1	0.838	0.889	0.892	0.923	0.751
	PA5	0.906				
	PA6	0.858				
	PA9	0.862				
Performance	PER6	0.768	0.825	0.835	0.883	0.655
	PER7	0.815				
	PER8	0.789				
	PER9	0.862				
Satisfaction	SAT3	0.872	0.850	0.863	0.893	0.627
	SAT4	0.719				
	SAT5	0.771				
	SAT9	0.739				
	SAT10	0.848				

Table 4 Discriminant validity based on Fornell-Larcker and $HTMT_{0.85}$ Criteria

Construct	Negative Affect	Performance	Positive Affect	Satisfaction
Negative Affect	**0.826**	*0.129*	*0.431*	*0.547*
Performance	−0.11	**0.809**	*0.35*	*0.293*
Positive Affect	−0.392	0.303	**0.867**	*0.723*
Satisfaction	−0.483	0.252	0.637	**0.792**

Diagonal elements (in bold) are the square root of the variance shared between the constructs and their measures (AVE). Italic values above the diagonal elements are $HTMT_{0.85}$ values. Values below the diagonal elements are the correlations between constructs

not appear to be relevant due to the small size of the path coefficient which often occurs when the sample size is large (Hair et al. 2017).[1] Focusing on job performance, only the effect of positive affect on this construct was significant.

It is important to highlight that the examination of the explained variance values shows that 9.2% of the variation in job performance was determined by positive affect and 47.8% of the variance in job satisfaction was defined by positive affect, negative affect, and job performance. More specifically, the decomposition of the R^2 value shows that 13.2% of the job satisfaction's explained variance corresponds to negative affect, 1.9% corresponds to job performance, and 32.2% corresponds to positive affect. Contrasting R^2 values with the guidelines for assessing explanatory power (0.19 = weak, 0.33 = moderate, 0.67 = substantial) proposed by Chin (1998) showed that while explanatory power for job performance was relatively weak, it was above the moderate level for job satisfaction.

Additionally, due to the significant indirect effect of positive affect on job satisfaction as well as the significant effect of job performance on job satisfaction, job performance was concluded to be a partial mediator in the relationship between positive affect and job satisfaction, thereby supporting H3 (+), as displayed in Table 6. Notably, since direct and indirect effects were pointing at the same direction, the mediation type was complementary (Hair et al. 2017). Moreover, the results did not provide empirical evidence for the mediating role of job performance on the relationship between negative affect and job satisfaction. In summary, only three directional hypotheses out of four were empirically supported in this analysis.

Next, PLSpredict analysis, albeit with the default settings, was carried out to evaluate the out-of-sample predictive power of the model.[2] Through this analysis, the model's ability to

generate accurate predictions of new interpretable observations is assessed. To this aim, the guidelines proposed by Shmueli et al. (2019) were followed and to evaluate the results, the Mean Absolute Error (MAE) values for the PLS and the Linear Model (LM) as well as the Q^2_predict values for the PLS model were focused. It is noteworthy that Q^2_predict, that compares the prediction errors resulted from PLS path model against the errors from simple mean predictions, should be positive to indicate that the PLS model offers an appropriate predictive performance. Additionally, the prediction errors of PLS-SEM (e.g., MAE values) should be smaller than the prediction errors resulted from the linear model (LM), implying that a theoretically established model either improves or doesn't worsen the predictive performance of the available indicator data.

Focusing on Q^2_predict values, the results displayed in Table 7 showed that all the Q^2_predict values of the indicators of job satisfaction and job performance, as the two target constructs in the model, were positive. In term of MAE values, the results revealed that none of the items of job performance in the PLS-SEM analysis yielded greater prediction errors compared to the naive LM benchmark, indicating a high out-of-sample predictive power. However, with respect to job satisfaction, 4 items of job satisfaction yielded greater prediction errors in comparison with LM-based results, thereby implying low predictive power with respect to job satisfaction.

Figure 3 displays the final model after taking all the steps in evaluating measurement models and the structural model proposed by Hair et al. (2019).

Multigroup Analysis

To run a permutation-based multigroup analysis (Chin and Dibbern 2010) to compare male and female academics in terms of the linkages within the model in order to test H5, an assessment of measurement model invariance was performed based on Measurement Invariance of Composite Models (MICOM) approach (Henseler et al. 2016) to ensure the quality of the results with respect to the multigroup analysis. This approach involves 3 steps namely, configural invariance, compositional invariance, and full measurement model invariance (Hair et al. 2018; Henseler et al. 2016).

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[1] Given the existing evidence in the literature in terms of the effect of job satisfaction on job performance, we investigated this effect while we disconnected the controls from job satisfaction and connected them to job performance. The results indicated that the path coefficient was small in size and significant ($b = 0.129$, $t = 3.89$).

[2] The Q^2 values (Geisser 1974; Stone 1974) of job performance and job satisfaction, as the combination of in-sample and out-of-sample predictive performance (Sarstedt, Ringle, & Hair, 2017), were 0.055 and 0.281, respectively.

Table 5 Effects on endogenous constructs

Construct	Direct Effect	t-Value	p Value	PCI	Explained Variance (R^2)	f^2
EC: Satisfaction ($R^2 = 0.478$)						
H1(+): Positive Affect	0.505	28.004	0.000	[0.474, 0.534]	0.322	0.377
H2(−): Negative Affect	−0.274	14.181	0.000	[−0.306, −0.243]	0.132	0.120
Performance [c]	0.074	3.808	0.000	[0.042, 0.107]	0.019	0.009
CV: Experience	0.039	2.600	0.009	[0.009, 0.068]	0.000	0.003
CV: Nationality	−0.035	2.141	0.032	[−0.067, −0.003]	0.000	0.002
CV: Marital Status	0.044	2.956	0.003	[0.015, 0.074]	0.006	0.004
EC: Performance ($R^2 = 0.092$)						
Positive Affect [a]	0.307	12.790	0.000	[0.268, 0.348]	0.093	0.088
Negative Affect [b]	0.011	0.445	0.326	[−0.029, 0.050]	−0.001	0.000

EC:

Endogenous construct; CV: Control Variable; PCI: Percentile Confidence Interval; Bootstrapping based on $n = 10,000$ bootstrap samples;

Paths from hypothesized effects assessed by applying a one-tailed test at 5% of significance level [5%, 95%];

Effects from the control variables assessed by applying a two-tailed test at 5% of significance level [2.5%, 97.5%];

On the grounds of three criteria namely, identical items per construct, identical data treatment, and identical algorithm settings, configural invariance of the constructs was established. In addition, compositional invariance was assessed based on MICOM procedure through running a one-tailed permutation test for the latent variables and a two-tailed permutation test for the control variables at 5% significance level and with 5000 permutations to ensure that differences in the path coefficients were not due to the differences in the ways the constructs had been formed across the groups. For this purpose, and as elaborated by Hair et al. (2018), the correlation between the composite scores was computed and the null hypothesis that this correlation was equal to 1 was tested. The resulting nonsignificant permutation p-values for each measurement model was the indication of the establishment of compositional invariance for the constructs. With respect to the full measurement model invariance assessment, the equality of composite means, as well as variances, were focused (Hair et al. 2018; Henseler et al. 2016). The outcome of the MICOM showed that the means and variances of composites across male and

female groups were not equal, thus indicating the failure to establish a full measurement invariance criterion. However, group compassion was feasible since compositional invariance had already been established, allowing to assume partial measurement invariance (Henseler et al. 2016). The results of the MICOM procedure has been displayed in Table 8.

The results of the permutation-based multigroup analysis have been displayed in Table 9. As displayed in this table, the magnitude of the path running from positive affect to job satisfaction was statistically different between male and female groups, with the path coefficient for the male group being larger. In other words, the influence of positive affect on job satisfaction was more considerable for male academics compared with the female group in Malaysian universities and colleges.

Discussion and Conclusion

This study aimed at examining the effects of affective states on job satisfaction and the mediating role of job performance

Table 6 Summary of the mediating effect test

Total effects on job satisfaction			Direct effects on job satisfaction			Indirect effects on job satisfaction					
Path	Total Effect	p Value	Path	Direct Effect	p Value	Path	Indirect Effect	p Value	PCI	Significant?	VAF (%)
Positive Affect -> Satisfaction	0.528	0.000	H1 (+)	0.505	0.000	H3 (+)	0.023	0.000	[0.012, 0.034]	Yes	4.36
Negative Affect -> Satisfaction	−0.273	0.000	H2 (−)	−0.274	0.000	H4 (−)	0.001	0.333	[−0.002, 0.004]	No	−0.37

PCI:

Percentile Confidence Interval; Bootstrapping based on n = 10,000 bootstrap samples; Paths from hypothesized effects assessed by applying a one-tailed test at 5% of significance level [5%, 95%]; VAF: Variance Accounted For

Table 7 PLSpredict results based on assessing MAE values

Indicator prediction summary

Indicator	PLS MAE	Q² predict	LM MAE	MAE$_{PLS}$-MAE$_{LM}$
PER6	0.439	0.056	0.444	−0.005
PER7	0.481	0.059	0.486	−0.005
PER8	0.528	0.035	0.529	−0.001
PER9	0.481	0.079	0.487	−0.006
SAT3	0.520	0.357	0.510	0.010
SAT4	0.594	0.211	0.583	0.011
SAT5	0.687	0.26	0.666	0.021
SAT9	0.500	0.253	0.501	−0.001
SAT10	0.469	0.385	0.468	0.001

within the proposed framework based on the data collected from academics working in Malaysian higher education sector. In addition, the effect of gender on the proposed model was addressed through a permutation-based multigroup analysis. Drawing upon AET (Weiss and Cropanzano 1996) and based on the previous research findings on job performance-job satisfaction linkage (Schermerhorn et al. 2010) as well as the controversies over the impact of gender on job satisfaction in academic settings (Callister 2006; Sabharwal and Corley 2009; Sloane and Ward 2001), a conceptual framework was developed to guide the research. Notably, three control variables were added to the model to address endogeneity issues

(Hult et al. 2018) as a major cause for concern in explanatory research works (Hair et al. 2019). Upon completing data collection and screening, full collinearity assessment (Kock 2015) was run to detect potential CMB problems and PLS-SEM approach was adopted for the main analysis.

The results with respect to the influence of positive and negative affect on job satisfaction supported H1 and H2 and were generally in line with previous studies such as Fisher (2002), Fuller et al. (2003), Glasø et al. (2011), and Webber (2018) in other contexts. More specifically, the results shed light on the importance of positive affect in positively contributing to job performance as well as job satisfaction, that is seen as an integral part of well-being (Warr 2007). In other words, positive affect including being enthusiastic, inspired, alert, and proud were identified as the determinants of job performance and job satisfaction among academics. The empirical support for the significant positive affect-job satisfaction linkage was also consistent with the debate that experiencing and enjoying frequent positive emotion can be one of the determinants of a more satisfied, helpful, connected, and longer life employees (Lyubomirsky et al. 2005). Indeed, the benefits of having a good feeling, as a positive emotion, can be extended to the workplaces (Hu and Kaplan 2015) since positive affective states cause outcomes such as a higher level of job performance and a more prosocial behavior (Dalal 2005) and forms more favorable job attitudes and reactions (Judge and Ilies 2004).
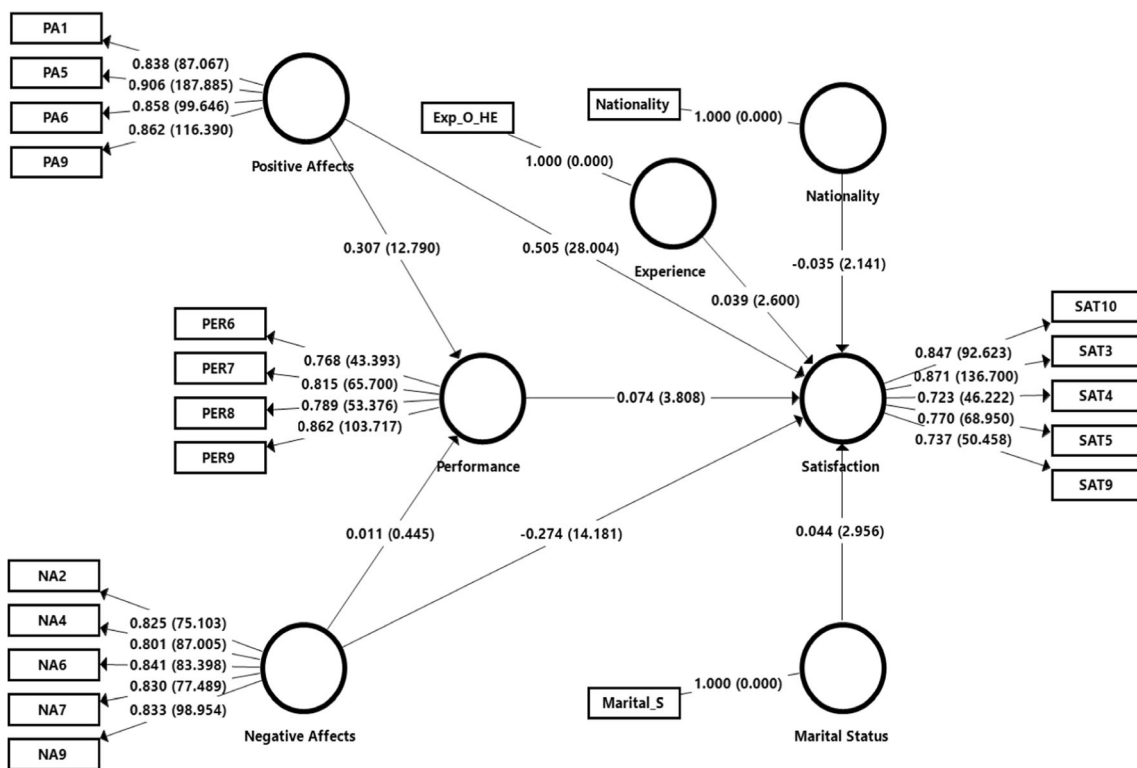

Fig. 3 Final PLS model with path coefficients, loadings, and t-values

Table 8 Measurement model invariance assessment based on MICOM approach

Measurement model	Configural invariance	Compositional Invariance assessment			Full measurement model invariance assessment						
		Original Correlation	0.05	Compositional invariance (Partial measurement invariance)	Mean Difference (Female - Male)	Confidence Interval	Equality of means	Variance Difference (Female - Male)	Confidence Interval	Equality of variances	Full measurement invariance
Negative Affect	Established	1.000	0.999	Established	−0.067	(−0.071, 0.070)	Equal	−0.197	(−0.129, 0.134)	Not equal	Not established
Performance	Established	0.999	0.996	Established	0.005	(−0.069, 0.071)	Equal	−0.124	(−0.118, 0.119)	Not equal	Not established
Positive Affect	Established	1.000	1.000	Established	−0.067	(−0.071, 0.069)	Equal	−0.126	(−0.108, 0.113)	Not equal	Not established
Satisfaction	Established	1.000	1.000	Established	0.007	(−0.072, 0.070)	Equal	−0.277	(−0.134, 0.129)	Not equal	Not established
Experience	Established	1.000	1.000	Established	0.287	(−0.082, 0.086)	Not equal	0.163	(−0.037, 0.043)	Not equal	Not established
Nationality	Established	1.000	1.000	Established	−0.376	(−0.082, 0.080)	Not equal	−1.316	(−0.280, 0.297)	Not equal	Not established
Marital Status	Established	1.000	1.000	Established	−0.143	(−0.084, 0.081)	Not equal	0.234	(−0.122, 0.133)	Not equal	Not established

The results are based on a one-tailed permutation test at 5% confidence level [5.00%, 95.00%] for the latent variables and a two-tailed permutation test at 5% confidence level [2.50%, 97.50%] for the control variables;

It is notable that empirical evidence was not found for the adverse impact of negative affect on job performance, while its negative impact on job satisfaction was relatively considerable. More specifically, negative affective states namely, being afraid, distress, nervous, ashamed, and irritable were identified as elements reducing job satisfaction of academics in Malaysian universities and colleges. This finding was not surprising since, for example, Fisher (2002) had also found significant zero-order correlations between affective states and job satisfaction that reduced to non-significant levels in the presence of other variables in the model. Similarly, in our analysis, the zero-order correlation between negative affect and job performance was statistically significant ($r = -0.11$ with confidence interval bounds of -0.148 and -0.078) based on one-tailed percentile bootstrapping test (see Table 4). Therefore, given the non-significant path running from negative affect to job performance in our proposed model, H3 was supported and H4 was rejected based on our analysis.

In addition, only positive affect-job satisfaction linkage was found to be statistically different between male and female lecturers, with the effect being stronger for the male group, thereby only supporting H5a among the group comparison hypotheses. While the size of the magnitude of the difference is not large and perhaps practically relevant, the difference might be due to different factors such as gender discrimination at workplace that has placed women in an inferior position compared with their male counterparts (Benokraitis and Feagin 1995) and the structural barriers to women's access and advancement as well as the "fixing the women" perspective as a gender equity approach (Ely and Meyerson 2000).

It is remarkable that the effect of job performance on job satisfaction was linear and significant, but not relevant, as evidenced by the small magnitude of the coefficient of the path (Hair et al. 2017) running from job performance to job satisfaction. This echoed the fact that the impact of job performance on model's explanatory power (with respect to job satisfaction) was very small, thereby indicating that job performance was not a strong predictor for job satisfaction. While irrelevancy of this effect was consistent with AET (Weiss and Beal 2005; Weiss and Cropanzano 1996) as this theory does not consider a direct link between these two variables, the existence of this practically irrelevant but statistically significant path was in line with the proposition made by Schermerhorn et al. (2010) in terms of research findings addressing the link between individual job performance measured at one time and later job satisfaction, albeit through a mediation mechanism. This was suggestive of more research studies to understand the real relationship between job performance and job satisfaction.

In a nutshell, while the contribution of affective states to attitudes and behaviors in different context have been supported through various research works, our results provided

Table 9   Permutation-based multigroup analysis for path coefficients and indirect effects

Hypothesis	Path	Path Coefficients (Female)	Path Coefficients (Male)	Path Coefficients Difference (Female - Male)	Permutation p-Values	Hypothesis Supported?
H5a	Positive Affect - > Satisfaction	0.474	0.548	−0.073	0.022	Yes
H5b	Negative Affect - > Satisfaction	−0.298	−0.242	−0.056	0.077	No
H5c	Positive Affect - > Performance - > Satisfaction	0.023	0.023	0.000	0.491	No
H5d	Negative Affect - > Performance - > Satisfaction	0.000	0.002	−0.001	0.361	No
The effect of control variables	Experience - > Satisfaction	0.029	0.053	−0.024	0.434	NA
	Marital Status - > Satisfaction	0.044	0.043	0.001	0.968	NA
	Nationality - > Satisfaction	−0.038	−0.035	−0.003	0.915	NA

NA:

Not Applicable; Multigroup test based on 5000 permutations; One-tailed test at 5% significance level [5%, 95%] for group comparisons based on the hypothesized effects; Two-tailed test at 5% significance level [2.5%, 97.5%] for group comparisons for the effects from control variables

evidences for these linkages in the turmoil, shifting, and competing higher education environment. Specifically, the contributing role of positive affect was more vital as the determinant for both job performance and job satisfaction of academicians within the proposed model.

Implications

With respect to the implications for theory, while AET does not assume a direct link between job performance and job satisfaction, we considered a causal link between these two constructs based on the grounds highlighted and addressed by Schermerhorn et al. (2010). Although our analysis shed light on the fact that job performance can be viewed as a mediator in the relationship between positive affect and job satisfaction, it was not considered as a practically relevant predictor of job satisfaction due to the small magnitude of the coefficient of the path running from job performance to job satisfaction. This provided more stronger evidence for relevancy and applicability of AET in higher education context, thereby providing an avenue in future research in terms of studying the antecedents and consequences of emotions of academics. In addition, the trending issue of organizational diversity within university domains was addressed in this study based on gender, providing support for the role of positive affect in causing a higher level of job satisfaction for the male in comparison with the female academics.

In terms of practical implications, the results suggested that policymakers should primarily focus on creating conductive working environments in academic ecosystems. Specific examples may be increasing the level of welfare, the involvement of academics in management processes such as decision making, fostering autonomy among the academics, and providing a higher level of supervisory support from the

universities' management teams. Within these environments, positive work events such as supervisory interactional justice (Lam and Chen 2012) causes positive emotional responses which in turn, can positively contribute to both job performance and job satisfaction of academic staff. In addition, policymakers may consider other factors that have been proven to increase both job performance and job satisfaction such as performance-contingent rewards (Schermerhorn et al. 2010). Given the two-way relationship between emotions and moods and the fact that bad moods travel person-to-person faster than good moods (Schermerhorn et al. 2010), making policies to reduce negative work events which trigger negative affective states are of high importance too. Specifically, mood contagion can have inflationary and deflationary effects on the moods of co-workers, teammates, family members, and friends (Whetten and Cameron 1995). Moreover, based on our model and the results of the multigroup analysis, gender-specific policies may be developed only with respect to positive affect-job satisfaction linkage. In other words, the policies with respect to other linkages within the model may be universal and applicable to both male and female lecturers.

In terms of the methodological implications, the current study, authored through a fresh and educative perspective, can serve as a guide highlighting the essential steps in evaluating PLS path models based on the latest proposed guidelines (Hair et al. 2019) and the demonstration of the application of advanced PLS methods (Hair et al. 2018).

Limitations and Recommendations

The first limitation is related to the data collection phase as data were not collected from the community

as well as private colleges. Hence, it is suggested to collect data from these types of institutions in future research in this area.

Even though this Malaysian study, as a large scale cross-sectional study, has significantly added value to the literature of the affective states, attitudes and behaviors in higher education literature, the longitudinal studies in the context of CB-SEM are suggested to address the issue of the variability of affective states over time (Mitchell 2011). It is due to the reason that based on AET, affective states fluctuate over time and as a result, the performance implications of affective states are dependent on affective states at particular times (Weiss and Beal 2005).

Also, while in this study job satisfaction, as one of the main attitudes in workplaces (Schermerhorn et al. 2010), was in focus, researchers are recommended to consider other main job attitudes namely, job involvement, organizational commitment, and employee engagement in future research guided by AET. Researchers can consider examining the reciprocal relationship between job satisfaction and job performance through other methods such as Efficient PLS or PLSe (Bentler and Huang 2014) or Maximum-Likelihood (ML) (Kline 2016) methods as well.

Moreover, since the data of this study were analyzed at an aggregate level, discipline-specific studies are recommended for future research endeavors. It is also suggested to employ independent and multi-item scales to measure each emotion separately in order to improve the accuracy of the findings in future research focusing on AET, as advised by Mitchell (2011). Finally, PLS-SEM robustness checks (Sarstedt et al. 2019) are recommended to further substantiate the results of PLS analysis.

Data Availability The data used in estimating the final model displayed in Fig. 3 are available in the HARVARD DATAVERSE repository https:// doi.org/10.7910/DVN/UIOZTK.

Compliance with Ethical Standards

Appendix 1

Table 10 Items of the final model with their means and standard deviations

Code	Item	Mean	SD
PA1	I feel enthusiastic at work in general	3.61	0.928
PA5	I feel inspired at work in general	3.62	0.999
PA6	I feel alert at work in general	3.74	0.872
PA9	I feel proud at work in general	3.79	0.993
NA2	I feel afraid at work in general	1.57	0.901
NA4	I feel distressed at work in general	2.16	1.105
NA6	I feel nervous at work in general	1.71	0.969
NA7	I feel ashamed at work in general	1.45	0.846
NA9	I feel irritable at work in general	1.73	1.021
PER6	When I want to reach a goal, I am usually able to succeed	4.02	0.663
PER7	I complete work in a timely and effective manner	3.99	0.715
PER8	I complete a large quantity of work	3.90	0.729
PER9	I perform high-quality work	3.98	0.689
SAT3	I feel good about working at this institution	3.79	0.855
SAT4	I feel secure about my job	3.74	0.894
SAT5	I believe management is concerned about me	3.19	1.011
SAT9	I get along with my supervisors	3.82	0.778
SAT10	I feel good about my job	3.93	0.781

References

Abdul Karim, N. H. (2008). Investigating the correlates and predictors of job satisfaction among Malaysian academic librarians. *Malaysian Journal of Library & Information Science, 13*(2), 69–88.

Aguirre-Urreta, M. I., & Rönkkö, M. (2018). Statistical inference with PLSc using bootstrap confidence intervals. *MIS Quarterly, 42*(3), 1001–1020. https://doi.org/10.25300/MISQ/2018/13587.

Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research. *International Journal of Contemporary Hospitality Management, 30*(1), 514–538.

Ashton-James, C. E., & Ashkanasy, N. M. (2005). What lies beneath? A process analysis of affective events theory. In N. M. Ashkanasy, W. J. Zerbe, & C. Härtel (Eds.), *The effect of affect in organizational settings* (Vol. 1, pp. 23–46). Oxford: Elsevier/JAI Press.

Atkinson, T. P., Matthews, R. A., Henderson, A. A., & Spitzmueller, C. (2018). Reactions to psychological contract breaches and organizational citizenship behaviours: An experimental manipulation of severity. *Stress and Health, 34*(3), 391–402. https://doi.org/10.1002/ smi.2798.

August, L., & Waltman, J. (2004). Culture, climate, and contribution: Career satisfaction among female faculty. *Research in Higher Education, 45*(2), 177–192. https://doi.org/10.1023/B:RIHE. 0000015694.14358.ed.

Ayoko, O. B., & Härtel, C. E. J. (2003). Workplace conflict, bullying, and counterproductive behaviors. *The International Journal of*

Organizational Analysis, 11(4), 283–301. https://doi.org/10.1108/eb028976.

Benokraitis, N. V., & Feagin, J. R. (1995). *Modern sexism: Blatant, subtle, and covert discrimination* (2nd ed.). Englewood Cliffs: Prentice Hall.

Bentler, P. M., & Huang, W. (2014). On components, latent variables, PLS and simple methods: Reactions to Rigdon's rethinking of PLS. *Long Range Planning, 47*(3), 138–145. https://doi.org/10.1016/j.lrp.2014.02.005.

Bernerth, J. B., & Aguinis, H. (2016). A critical review and best-practice recommendations for control variable usage. *Personnel Psychology, 69*(1), 229–283. https://doi.org/10.1111/peps.12103.

Bilimoria, D., Perry, S. R., Liang, X., Stoller, E. P., Higgins, P., & Taylor, C. (2006). How do female and male faculty members construct job satisfaction? The roles of perceived institutional leadership and mentoring and their mediating processes. *The Journal of Technology Transfer, 31*(3), 355–365. https://doi.org/10.1007/s10961-006-7207-z.

Bozeman, B., & Gaughan, M. (2011). Job satisfaction among university faculty: Individual, work, and institutional determinants. *The Journal of Higher Education, 82*(2), 154–186.

Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (3rd ed.). New York: Routledge.

Callister, R. R. (2006). The impact of gender and department climate on job satisfaction and intentions to quit for faculty in science and engineering fields. *The Journal of Technology Transfer, 31*(3), 367–375. https://doi.org/10.1007/s10961-006-7208-y.

Campbell, J. P. (1990). The role of theory in industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 1, 2nd ed., pp. 39–73). Palo Alto: Consulting Psychologists Press.

Cepeda-Carrión, G., Cegarra-Navarro, J.-G., & Cillo, V. (2019). Tips to use partial least squares structural equation modelling (PLS-SEM) in knowledge management. *Journal of Knowledge Management, 23*(1), 67–89. https://doi.org/10.1108/JKM-05-2018-0322.

Cerci, P. A., & Dumludag, D. (2019). Life satisfaction and job satisfaction among university faculty: The impact of working conditions, academic performance and relative income. *Social Indicators Research, 144*, 785–806. https://doi.org/10.1007/s11205-018-02059-8.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–358). Mahwah: Lawrence Erlbaum.

Chin, W. W., & Dibbern, J. (2010). An introduction to a permutation based procedure for multi-group PLS analysis: Results of tests of differences on simulated data and a cross cultural analysis of the sourcing of information system services between Germany and the USA. In V. E. Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of partial least squares: Concepts, methods and applications* (pp. 171–193). Berlin: Springer.

Christen, M., Iyer, G., & Soberman, D. (2006). Job satisfaction, job performance, and effort: A reexamination using agency theory. *Journal of Marketing, 70*(1), 137–150. https://doi.org/10.1509/jmkg.70.1.137.qxd.

Cohn, S. (2019). Race, gender, and discrimination at work. https://doi.org/10.4324/9780429497865.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston: Pearson Education, Inc..

Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology, 90*(6), 1241–1255.

de Lourdes Machado-Taylor, M., Meira Soares, V., Brites, R., Brites Ferreira, J., Farhangmehr, M., Gouveia, O. M. R., & Peterson, M. (2016). Academic job satisfaction and motivation: Findings from a nationwide study in Portuguese higher education. *Studies in Higher Education, 41*(3), 541–559. https://doi.org/10.1080/03075079.2014.942265.

Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. *MIS Quarterly, 39*(2), 297–316.

Elfenbein, H. A. (2007). Emotion in organizations: A review and theoretical integration. *The Academy of Management Annals, 1*(1), 315–386. https://doi.org/10.1080/078559812.

Ely, R. J., & Meyerson, D. E. (2000). Theories of gender in oganizations: A new approach to organizational analysis and change. *Research in Organizational Behavior, 22*, 103–151. https://doi.org/10.1016/S0191-3085(00)22004-2.

Fisher, C. D. (2000). Mood and emotions while working: Missing pieces of job satisfaction? *Journal of Organizational Behavior, 21*(2), 185–202. https://doi.org/10.1002/(SICI)1099-1379(200003)21:2<185::AID-JOB34>3.0.CO;2-M.

Fisher, C. D. (2002). Antecedents and consequences of real-time affective reactions at work. *Motivation and Emotion, 26*(1), 3–30. https://doi.org/10.1023/a:1015190007468.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.2307/3151312.

Fuller, J. A., Stanton, J. M., Fisher, G. G., Spitzmüller, C., Russell, S. S., & Smith, P. C. (2003). A lengthy look at the daily grind: Time series analysis of events, mood, stress, and satisfaction. *Journal of Applied Psychology, 88*(6), 1019–1033. https://doi.org/10.1037/0021-9010.88.6.1019.

Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika, 61*(1), 101–107. https://doi.org/10.2307/2334290.

Ghasemy, M., Sufean, H., Ahmad Zabidi, A. R., Mohd Jamil, M., & Ghavifekr, S. (2018a). Determining the key capacities of effective leaders in Malaysian public and private focused universities. *SAGE Open, 8*(4), 1–12. https://doi.org/10.1177/2158244018807620.

Ghasemy, M., Sufean, H., Megat Ahmad Kamaluddin, M. D., Mariani, M. N., Ghavifekr, S., & Husaina Banu, K. (2018b). Issues in Malaysian higher education: A quantitative representation of the top five priorities, values, challenges, and solutions from the viewpoints of academic leaders. *SAGE Open, 8*(1), 1–15. https://doi.org/10.1177/2158244018755839.

Glasø, L., Vie, T. L., Holmdal, G. R., & Einarsen, S. (2011). An application of affective events theory to workplace bullying: The role of emotions, trait anxiety, and trait anger. *European Psychologist, 16*(3), 198–208. https://doi.org/10.1027/1016-9040/a000026.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Thousand Oaks: Sage.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2018). *Advanced issues in partial least squares structural equation modeling*. Thousand Oaks: Sage.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203.

Henseler, J. (2018). Partial least squares path modeling: Quo vadis? *Quality & Quantity, 52*(1), 1–8. https://doi.org/10.1007/s11135-018-0689-6.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2016). Testing measurement invariance of composites using partial least squares. *International Marketing Review, 33*(3), 405–431. https://doi.org/10.1108/IMR-09-2014-0304.

Hu, X., & Kaplan, S. A. (2015). Is "feeling good" good enough? Differentiating discrete positive emotions at work. *Journal of*

Organizational Behavior, 36(1), 39–58. https://doi.org/10.1002/job.1941.

Hult, G. T. M., Joseph, F. H., Proksch, D., Sarstedt, M., Pinkwart, A., & Ringle, C. M. (2018). Addressing endogeneity in international marketing applications of partial least squares structural equation modeling. *Journal of International Marketing, 26*(3), 1–21. https://doi.org/10.1509/jim.17.0151.

Janssen, S., & Backes-Gellner, U. (2016). Occupational stereotypes and gender-specific job satisfaction. *Industrial Relations: A Journal of Economy and Society, 55*(1), 71–91. https://doi.org/10.1111/irel.12126.

Judge, T. A., & Ilies, R. (2004). Affect and job satisfaction: A study of their relationship at work and at home. *Journal of Applied Psychology, 89*(4), 661–673. https://doi.org/10.1037/0021-9010.89.4.661.

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*(3), 376–407. https://doi.org/10.1037//0033-2909.I27.3.376.

Judge, T. A., Scott, B. A., & Ilies, R. (2006). Hostility, job attitudes, and workplace deviance: Test of a multilevel model. *Journal of Applied Psychology, 91*(1), 126–138. https://doi.org/10.1037/0021-9010.91.1.126.

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). New York: Guilford Publications.

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration, 11*(4), 1–10. https://doi.org/10.4018/ijec.2015100101.

Kock, N., & Lynn, G. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for Information Systems, 13*(7), 546–580.

Lam, W., & Chen, Z. (2012). When I put on my service mask: Determinants and outcomes of emotional labor among hotel service providers according to affective event theory. *International Journal of Hospitality Management, 31*(1), 3–11. https://doi.org/10.1016/j.ijhm.2011.04.009.

Li, Y.-F., Chao, M., & Shih, C.-T. (2018). Nurses' intention to resign and avoidance of emergency department violence: A moderated mediation model. *International Emergency Nursing, 39*, 55–61. https://doi.org/10.1016/j.ienj.2017.09.004.

Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131*(6), 803–855. https://doi.org/10.1037/0033-2909.131.6.803.

Macdonald, S., & MacIntyre, P. (1997). The generic job satisfaction scale. *Employee Assistance Quarterly, 13*(2), 1–16.

Machado-Taylor, M. D. L., Virgílio Meira, S., Brites, R., Ferreira, J. B., Farhangmehr, M., Gouveia, O. M. R., & Peterson, M. (2016). Academic job satisfaction and motivation: Findings from a nationwide study in Portuguese higher education AU - de Lourdes Machado-Taylor, Maria. *Studies in Higher Education, 41*(3), 541–559. https://doi.org/10.1080/03075079.2014.942265.

Miller, J. S., & Cardy, R. L. (2000). Self-monitoring and performance appraisal: Rating outcomes in project teams. *Journal of Organizational Behavior, 21*(6), 609–626. https://doi.org/10.1002/1099-1379(200009)21:6<609::AID-JOB42>3.0.CO;2-K.

Mitchell, L. D. (2011). Job satisfaction and affective events theory: What have we learned in the last 15 years? *Business Renaissance Quarterly, 6*(2), 43–53.

Okpara, J. O., Squillace, M., & Erondu, E. A. (2005). Gender differences and job satisfaction: A study of university teachers in the United States. *Women in Management Review, 20*(3), 177–190. https://doi.org/10.1108/09649420510591852.

Oshagbemi, T. (1997). Job satisfaction profiles of university teachers. *Journal of Managerial Psychology, 12*(1), 27–39. https://doi.org/10.1108/02683949710164235.

Oshagbemi, T. (2000). Gender differences in the job satisfaction of university teachers. *Women in Management Review, 15*(7), 331–343. https://doi.org/10.1108/09649420010378133.

Porath, C. L., & Pearson, C. M. (2012). Emotional and behavioral responses to workplace incivility and the impact of hierarchical status. *Journal of Applied Social Psychology, 42*, E326–E357.

Ringle, C. M., Wende, S., & Becker, J.-M. (2015). SmartPLS 3. Retrieved from www.smartpls.com

Ropers-Huilman, B. (2000). Aren't you satisfied yet? Women faculty members' interpretations of their academic work. In L. S. Hagedorn (Ed.), *What contributes to job satisfaction among faculty and staff. New directions for institutional research* (pp. 21–32). San Francisco: Jossey-Bass.

Rostan, M., & Ceravolo, F. A. (2015). The internationalisation of the academy: Convergence and divergence across disciplines. *European Review, 23*(S1), 38–54. https://doi.org/10.1017/S1062798714000763.

Sabharwal, M., & Corley, E. A. (2009). Faculty job satisfaction across gender and discipline. *The Social Science Journal, 46*(3), 539–556. https://doi.org/10.1016/j.soscij.2009.04.015.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modeling. In C. Homburg, M. Klarmann, & A. Vomberg (Eds.), *Handbook of market research* (pp. 1–40). Cham: Springer.

Sarstedt, M., Ringle, C. M., Cheah, J., Ting, H., Moisescu, O. I., & Radomir, L. (2019). Structural model robustness checks in PLS-SEM. *Tourism Economics*, 1–24. https://doi.org/10.1177/1354816618823921.

Schermerhorn, J. R., Hunt, J. G., Osborn, R. N., & Uhl-Bien, M. (2010). *Organizational behavior* (11th ed.). Hoboken: Wiley.

Scott, G., Tilbury, D., Sharp, L., & Deane, E. (2012). *Turnaround leadership for sustainability in higher education*. Sydney: Office of Learning and Teaching, Australian Government.

Settles, I. H., Cortina, L. M., Malley, J., & Stewart, A. J. (2006). The climate for women in academic science: The good, the bad, and the changeable. *Psychology of Women Quarterly, 30*(1), 47–58. https://doi.org/10.1111/j.1471-6402.2006.00261.x.

Shmueli, G., & Koppius, O. R. (2011). Predictive analytics in information systems research. *MIS Quarterly, 35*(3), 553–572. https://doi.org/10.2307/23042796.

Shmueli, G., Sarstedt, M., Joseph, F. H., Cheah, J.-H., Hiram, T., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing, 53*(11), 2322–2347. https://doi.org/10.1108/EJM-02-2019-0189.

Sloane, P. J., & Ward, M. E. (2001). Cohort effects and job satisfaction of academics. *Applied Economics Letters, 8*(12), 787–791. https://doi.org/10.1080/13504850110045733.

Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions. *Journal of the Royal Statistical Society: Series B: Methodological, 36*(2), 111–147.

Streukens, S., & Leroi-Werelds, S. (2016). Bootstrapping and PLS-SEM: A step-by-step guide to get more out of your bootstrap results. *European Management Journal, 34*(6), 618–632. https://doi.org/10.1016/j.emj.2016.06.003.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston: Pearson Education.

Teixeira, P., & Koryakina, T. (2013). Funding reforms and revenue diversification: Patterns, challenges and rhetoric. *Studies in Higher Education, 38*(2), 174–191. https://doi.org/10.1080/03075079.2011.573844.

Wan, C. D., Morshidi, S., & Dzulkifli, R. (2015). The idea of a university: Rethinking the Malaysian context. Humanities, 4, 266-282. https://doi.org/10.3390/h4030266

Ward, M. E., & Sloane, P. J. (2000). Non-pecuniary advantages versus pecuniary disadvantages; job satisfaction among male and female

academics in Scottish universities. *Scottish Journal of Political Economy, 47*(3), 273–303. https://doi.org/10.1111/1467-9485.00163.

Warr, P. (2007). *Work, happiness, and unhappiness*. New York: Psychology Press.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063–1070.

Webber, K. L. (2018). Does the environment matter? Faculty satisfaction at 4-year colleges and universities in the USA. *Higher Education*, 1-21. https://doi.org/10.1007/s10734-018-0345-z.

Weiss, H. M., & Beal, D. J. (2005). Reflections on affective events theory. In N. M. Ashkanasy, W. Zerbe, & C. Härtel (Eds.), *The effect of affect in organizational settings* (Vol. 1, pp. 1–21). Bingley: Emerald.

Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior: An annual series of analytical essays and critical reviews, Vol. 18.* (Vol. 18, pp. 1-74). US: Elsevier science/JAI Press.

Whetten, D. A., & Cameron, K. S. (1995). *Developing management skills* (3rd ed.). New York: HarperCollins.

Whitman, D. S., Van Rooy, D. L., & Viswesvaran, C. (2010). Satisfaction, citizenship behaviors, and performance in work units: A meta-analysis of collective construct relations. *Personnel Psychology, 63*(1), 41–81. https://doi.org/10.1111/j.1744-6570.2009.01162.x.

Wilson, F. M. (2016). *Organizational behaviour and gender* (2nd ed.). London: Taylor & Francis.

Zagelmeyer, S., Sinkovics, R. R., Sinkovics, N., & Kusstatscher, V. (2018). Exploring the link between management communication and emotions in mergers and acquisitions. *Canadian Journal of Administrative Sciences / Revue Canadienne des Sciences de l'Administration, 35*(1), 93–106. https://doi.org/10.1002/cjas.1382.