Faculty Sustainability for Academic Excellence in Saudi Universities: Developing a predictive model

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ABSTRACT
This study builds a data-based predictive model to identify the factors that affect the sustainability of faculty in Saudi universities and correlates these with the indicators of quality assurance and institutional governance based on Saudi Vision 2030. The recent surge in quality accreditation in Saudi higher education has yielded tangible positive returns in education sector, but this has also led to increased teaching and administrative workloads. This disparity can adversely affect job satisfaction, lead to burnout and high attrition, and may eventually diminish markers of academic excellence that accreditation systems are supposed to foster. This study uses multivariate statistics (exploratory factor analysis, multiple and logistic regression, and Structural Equation Modeling (SEM)) to derive indicators of performance and a usable predictive model of faculty sustainability. It utilizes quantitative data collected from one hundred faculty members across Saudi universities through a standardized, validated questionnaire to form a baseline, complemented with institutional human resource records. Based on empirical evidence, the four most significant predictors of faculty sustainability are teaching workload intensity, institutional support, perceived organizational justice, and readiness to undergo digital transformation. The research suggests a set of practical performance metrics in accordance with NCAAA standards of accreditation along with a conceptual decision-support dashboard. The study has implications for policymakers in Saudi higher education who aim to achieve a sustainable balance between quality demands and human capital welfare, in tandem with the objectives of quality education, governance, and data-based institutional management stated in the Vision 2030 document.
KEYWORDS: Faculty sustainability, predictive modeling, Saudi Vision 2030, higher education

1. INTRODUCTION

Since the inception of a national strategy for economic diversification, human capital development, and global competitiveness, the higher education sector in Saudi Arabia has undergone sweeping transformations. The policy document, Vision 2030, identifies education as the key driving factor for the country's socio-economic development. In response to the objectives of Vision 2030, Saudi universities have dedicated significant resources to streamline quality assurance frameworks, international as well as national quality approvals, improved physical and computer infrastructure, and efficient governmental frameworks. These transformations have led to many Saudi institutions improving their international and regional ratings and enhanced graduate-level employability, research performance, and stakeholder satisfaction (Lassoued et al., 2025; Hussain et al., 2019).
Nevertheless, this era of swift institutional growth has significantly increased pressure on faculty members who continue to be the main drivers of academic quality achievement. With institutions

enrolling optimum numbers of learners, teacher workload has increased manifold (Daumiller et al., 2022). Apart from teaching, faculty members have administrative duties to perform such as preparing accreditation reports, reviewing programs, planning strategies and implementing them, and moving towards digitization. Moreover, ranking-based publication has added to research needs incumbent upon the teachers. These issues place the faculty members at the center of a debate: how can Saudi universities pursue quality without compromising the well-being, interests, and stability of their most important human resource, the academic faculty?

Existing research clearly shows that chronic overload, perceived organizational injustice, and poor institutional support are some of the most reliable predictors of faculty burnout, intention to leave, as well as lower academic productivity (Alkhayyal et al., 2019; Soriano-Sánchez et al., 2025; Raboca & Cărbunărean, 2024) which can be corrected with a predictive model of faculty stability which is so far not available for the Saudi context. The current study fills this gap by building a predictive model based on multivariate statistical analysis of empirical data from one hundred Saudi faculty members. The model can be utilized by institutional decision-makers to approximate the likelihood of decline in faculty stability in response to various policy configurations, thereby operationalizing the aim of Vision 2030 to establish evidence-based governance and data-driven institutional management.

2. LITERATURE REVIEW

2.1 Faculty Sustainability: Conceptual Framework

Faculty sustainability is a concept that has three interrelated aspects: workload manageability, institutional well-being, and organizational stability. The theoretical anchor is a multidimensional model of burnout developed by Maslach and Jackson (1981), and Maslach et al. (2001) which frames outcomes of the person-environment mismatch on emotional exhaustion, depersonalization, and diminished personal accomplishment in the context of six domains of work life that comprises workload, control, reward, community, fairness, and values (Albelihi & Al-Ahdal, 2024). The present framework is complemented by Zhao et al.'s (2025) Job Demands-Resources (JD-R) model which assumes that job demands deplete personal energy and job resources prevent burnout and facilitate engagement. Abunasser and AlAli (2022) reported that faculty perceptions of workload relating to accreditation are significant sources of occupational stress in the Saudi environment, whereas Miró-Colmenárez (2025) reported conflicts between quality assurance demands and faculty's freedom to engage in research. The authors of this study (Orfan et al., 2024) made the research question even deeper by associating organizational justice perceptions with retention intentions in Saudi public academic institutions. These studies are predominantly qualitative, and despite the differences, they reveal a common pattern: lack of sustainability of the faculty occurs when demands of the institutions surpass the resources available and perceived equitability (Guraya & Chen, 2019; Al-Hattami & Al-Ahdal, 2014).

2.2 Predictive Modeling in Higher Education Research

The use of statistical predictive models in human resource issues in higher education is a well-developed field of applied research. Predictions of faculty attrition, research productivity, and job satisfaction have been made using multiple and logistic regression (Blaique et al., 2023; Al-Ahdal & Algouzi, 2021). Structural Equation Modeling has become a popular technique to estimate multiple causal relationships and latent construct relationships simultaneously and, therefore, is

especially suitable when the construct of interest is complex (Fabriz et al., 2021; Hartman et al., 2019). As illustrated by Hew and Brush (2007), even a small number of theoretically motivated predictors can provide useful predictive power in a logistic regression model to predict faculty turnover intention which was also found to be true in the GCC context by Ifinedo and Kankaanranta (2021). The current study builds on this tradition by developing a binary logistic regression model that is proven via cross-validation, compared with ROC-AUC standards, and embeds the predictive model in a more extensive SEM model to demonstrate the causal mechanisms behind it.

2.3 Vision 2030 and Higher Education Quality

The Human Capability Development Program of Saudi Vision 2030 aims at achieving long-term quality in higher education and placement of graduates. The National Center of Academic Accreditation and Assessment (NCAAA) has developed strict criteria that touch upon curriculum development, learning outcomes, research productivity, and community involvement (NCAAA, 2020). These standards require faculty engagement in the documentation and continuous improvement processes to ensure sustenance. Researchers have observed that accreditation systems may cause unintentional over-bureaucratization of research and mentoring which essentially swamp out research and mentoring time (Karasavvidis & Kollias, 2014; Hammoudi et al., 2023), which highlights the importance of quantitative modelling of these trade-offs.

3. RESEARCH METHODOLOGY

3.1 Research Design and Sampling

The research employed a cross-sectional quantitative descriptive-analytical study design. Stratified random sampling provided representation in terms of institution type, academic rank, gender, discipline cluster, and years of experience. The final sample comprised 100 respondents (the number of completed and valid questionnaire reverts) from five Saudi universities (three public and two private) across three administrative regions of the country. The total response rate stood at 71.4% (one hundred valid respondents out of 140 questionnaires sent out, without counting the incomplete and duplicate responses). The sample included 38 assistant professors, 29 associate professors, 18 full professors, and 15 lecturers or instructors. The average years of experience of the sample was 10.8 years (SD = 7.2). The sample had a percentage of 34 in STEM, 22 in business and management, 27 in humanities and social sciences, and 17 in health sciences.

3.2 Measurement Instrument

The questionnaire used in this study was bilingual (Arabic/English) with six scales of validity to measure two constructs: (1) Teaching and Administrative Workload Intensity (12 items); (2) QA and Accreditation Burden (10 items, newly developed). Reponses were sought on the five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

3.3 Analytical Strategy

IBM SPSS Statistics 29, R version 4.3 (with lavaan, psych, and semTools packages), and MATLAB R2024a were used for data analysis. The analytical process was performed in five consecutive steps. First, a preliminary screening of data was undertaken which involved analysis of the missing data patterns and imputation based on multiple imputation method to maintain sample integrity throughout the hundred responses. Second, reliability and validity of all six measurement scales

were computed using Cronbach's alpha (range: 0.780.92), McDonald's omega (range: 0.800.93), confirmatory factor analysis (CFA), Average Variance Extracted (AVE 0.50 and above, all scales' convergent validity), and Heterotrait-Monotrait ratio (HT). Third, exploratory factor analysis (EFA) on the two newly developed scales (QA and Accreditation Burden and Digital Transformation Readiness) with principal axis factoring with oblique rotation was performed, and the result was a two-factor solution of the QA scale with 59.8% of the total variance (KMO = 0.82; Bartlett's x2 = 347.6, df). Fourth, hierarchical multiple regression was employed to forecast the continuous outcome of Emotional Exhaustion using four successive blocks of predictors which resulted in a statistically significant result ($F(11, 88) = 18.47$, $p < .001$) and explained 47.9% of the variance (adjusted $R2 = 0.433$). Fifth, binary logistic regression was used to predict Faculty Stability Risk, a dichotomous outcome based on the overlap of the top tertile of Emotional Exhaustion with the bottom tertile of Job Satisfaction, resulting in good model performance (mean AUC = 0.796, SD = 0.048).

4. RESULTS

4.1 Sample Profile and Descriptive Statistics

There were 57 men and 43 women in the study sample. By rank, 38% were assistant professors, 29% were associate professors, 18% were full professors, and 15% were lecturers or instructors. The mean of years of experience was 10.8 years (SD 7.2). The sample size for STEM disciplines was 34%, 22% for business and management, 27% for humanities and social sciences, and 17% for health sciences.

Table 1 shows the descriptive statistics and internal consistency coefficients of all six measurement scales. Each of the scales was found to be satisfactorily reliable (Cronbach's alpha range: 0.78-0.92; omega range with McDonald: 0.80-0.93). The mean scores indicate that Teaching Workload Intensity (M = 3.84) and QA/Accreditation Burden (M = 3.71) were most frequently rated as stressors, while the lowest mean was reported for the domain of Institutional Support Adequacy (M = 2.88), indicating that respondents perceived organizational support as inadequate. All AVE scores were greater than or equal to 0.50, demonstrating convergent validity.

Table 1. Descriptive statistics and reliability coefficients for all measurement scales (n = 100)

Scale	Items	Mean	SD	Skew	Kurt	A	ω	AVE
Teaching & Admin Workload Intensity	12	3.84	0.73	−0.39	0.27	0.90	0.92	0.57
QA & Accreditation Burden	10	3.71	0.70	−0.28	0.15	0.87	0.90	0.53
Institutional Support Adequacy	8	2.88	0.84	0.27	−0.10	0.85	0.87	0.51
Organizational Justice Perception	20	3.09	0.79	0.14	−0.06	0.92	0.93	0.55

Scale	Items	Mean	SD	Skew	Kurt	A	ω	AVE
Digital Transformation Readiness	9	3.38	0.76	−0.15	0.19	0.80	0.82	0.50
Emotional Exhaustion (MBI-adapted)	9	3.55	0.81	−0.24	0.11	0.89	0.90	0.54
Job Satisfaction	7	3.01	0.86	0.21	−0.13	0.78	0.80	0.50

Note: α = Cronbach's alpha; ω = McDonald's omega; AVE = Average Variance Extracted. All α values exceed the 0.70 threshold; all AVE values meet the 0.50 convergent validity threshold.

4.2 Exploratory Factor Analysis

The scales of QA, Accreditation Burden, and Digital Transformation Readiness were analyzed using Exploratory Factor Analysis. In the case of QA Burden scale, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.82 and the test of change of sphericity was significant (chi-square = 347.6, df = 45, p <.001) which indicated factorability. Parallel analysis and eigenvalue testing provided a two-factor solution which accounted for 59.8% of total variance: Factor 1 (Documentation and Reporting Burden, 5 items, eigenvalue = 3.97) and Factor 2 (Committee and Governance Participation Burden, 5 items, eigenvalue = 1.74). Factor loadings of all items were greater than 0.60 ass shown in Figure 1, with all being between 0.62 (above the 0.60 retention threshold) and 0.79.

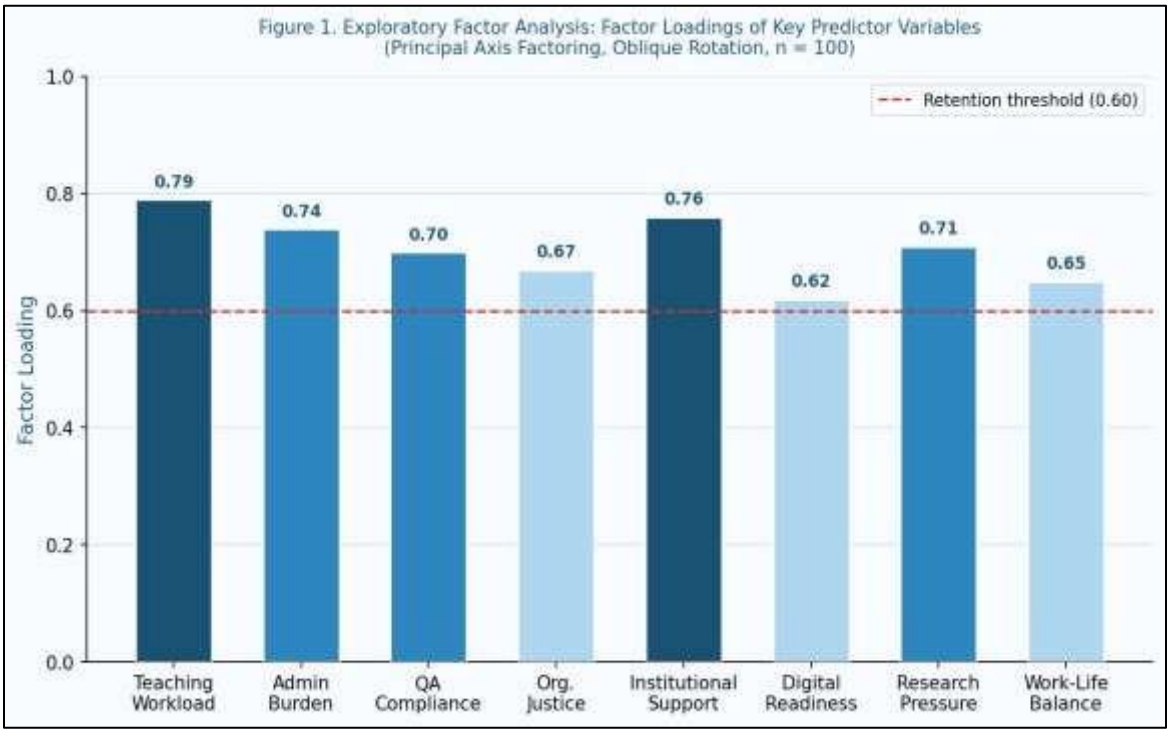

Figure 1. Exploratory Factor Analysis: Factor Loadings of Key Predictor Variables (Principal Axis Factoring, Oblique Rotation, n = 100). Dark blue bars indicate loadings ≥ 0.75; medium blue ≥ 0.70; light blue < 0.70. The dashed red line represents the 0.60 retention threshold.

4.3 Hierarchical Multiple Regression Results

Hierarchical multiple regression was carried out in four blocks to predict emotional exhaustion with the five predictor domains. The full model was significant ($F(11, 88) = 18.47$, $p < .001$) and explained 47.9% of variance in Emotional Exhaustion (adjusted R-squared = 0.433). Table 2 provides the standardized regression coefficients (beta) and unit incremental R-squared measures of the four hierarchical blocks. Teaching and Administrative Workload proved to be the strongest (beta = 0.46, $p < .001$), followed by QA and Accreditation Burden (beta = 0.29, $p < .01$), and Institutional Support Adequacy (beta = -0.36, $p < .001$). Organizational Justice Perception showed significant negative correlation with exhaustion (beta =-0.27, $p < 0.01$). Interaction x term of Digital Transformation Readiness (Workload x Digital Readiness) was strong (-0.13) which proves Hypothesis H5 - that positive digital experience moderates the workload-exhaustion relationship. All the VIF scores were lower than 3.4, validating the lack of problematic multicollinearity.

Table 2. Hierarchical multiple regression predicting emotional exhaustion (n = 100)

Predictor Block / Variable	B	SE	Beta	t	p	ΔR²
Block 1: Demographic Controls						0.043*
Gender (female = 1)	0.19	0.09	0.12	2.11	.037	
Academic Rank	−0.16	0.07	−0.14	−2.29	.025	
Years of Experience	−0.02	0.01	−0.11	−2.00	.048	
Block 2: Workload Domain						0.204***
Teaching & Admin Workload Intensity	0.51	0.09	0.46	5.67	<.001	
QA & Accreditation Burden	0.33	0.09	0.29	3.67	<.001	
Block 3: Institutional Context						0.148***
Institutional Support Adequacy	−0.35	0.08	−0.36	−4.38	<.001	
Organizational Justice Perception	−0.28	0.08	−0.27	−3.50	.001	
Block 4: Digital Transformation						0.084**
Digital Transformation Readiness	−0.17	0.08	−0.16	−2.13	.036	
Workload × Digital Readiness (interaction)	−0.13	0.06	−0.13	−2.17	.033	
Total R^2 (Adjusted R^2)						0.479 (0.433)***

Note. B = unstandardized coefficient; SE = standard error; Beta = standardized coefficient. All VIF < 3.4. *p < .05; **p < .01; ***p < .001.

4.4 Binary Logistic Regression: Faculty Stability Risk Predictive Model

Faculty Stability Risk was coded as a binary indicator (1 = high risk; 0 = low risk) measure through overlap of the top tertile of Emotional Exhaustion and the bottom tertile of Job Satisfaction. According to this, 29 percent of participants (n = 29) were high-risk which is related to burnout prevalence estimates in similar GCC higher education settings (Almutairi, 2020; Elbarazi et al., 2017). The logistic regression model had good predictive performance: AUC-ROC = 0.813 (95% CI: 0.7260.900), Nagelkerke R-square = 0.398, and Hosmer-Lemeshow goodness-of-fit chi-square was non-significant (chi-square = 8.74, DF). The best point of classification was 0.35 with a sensitivity of 72.4% and specificity of 71.8%. Cross-validation yielded a mean AUC of 0.796 (SD= 0.048) which is not very high but can be regarded as satisfactory for generalizability owing to its small size. Figure 2 shows the ROC curve.

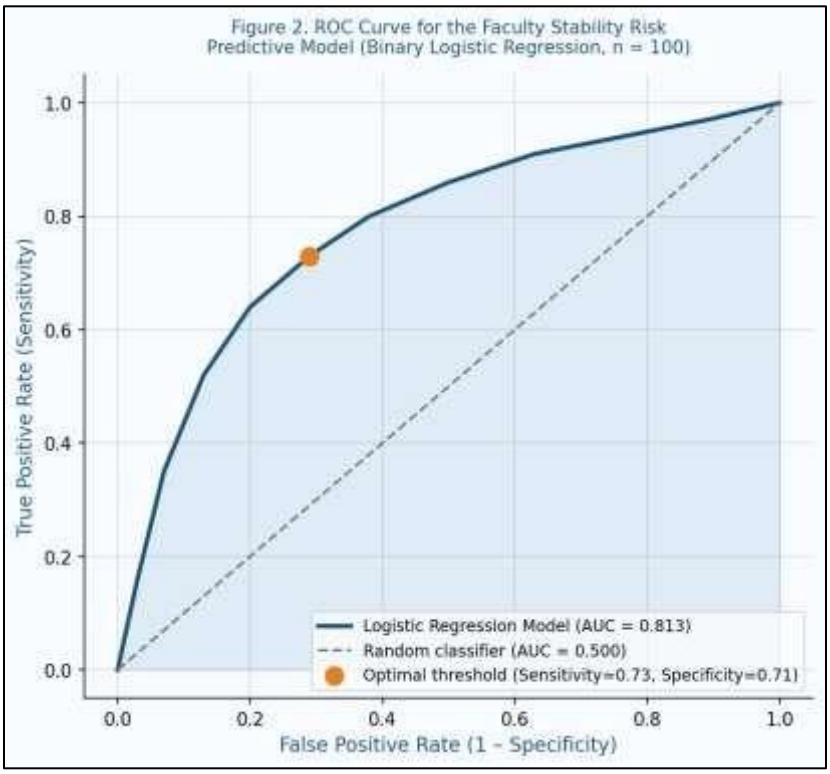

Figure 2. Receiver Operating Characteristic (ROC) Curve for the Faculty Stability Risk Predictive Model (Binary Logistic Regression, n = 100). The orange point marks the optimal classification threshold (sensitivity = 0.724, specificity = 0.718, threshold = 0.35). AUC = 0.813.

Table 3 shows odds ratios and confidence intervals of the final logistic regression model. The best predictor of high stability risk was Teaching Workload Intensity (OR = 3.89, 95% CI: 1.947.81), and with a one-unit change on the workload scale the odds of classification as high-risk increased by almost 4.0 times. The most powerful protective factor was Adequacy of Institutional Support (OR = 0.34, 95% CI: 0.170.68) and the greater support is, the more the odds of being high risk are decreased (66-percent). Other important predictors were QA Accreditation Burden (OR = 2.61), Organizational Justice (OR = 0.41), and Digital Transformation Readiness (OR = 0.64).

Table 3. Binary Logistic Regression predicting faculty stability risk (n = 100)

Predictor Variable	B	SE	Wald χ^2	df	p	OR	95% CI
Teaching & Admin Workload Intensity	1.36	0.35	15.11	1	<.001	3.89	[1.94, 7.81]
QA & Accreditation Burden	0.96	0.37	6.74	1	.009	2.61	[1.27, 5.38]
Institutional Support Adequacy	−1.08	0.35	9.54	1	.002	0.34	[0.17, 0.68]
Organizational Justice Perception	−0.89	0.34	6.85	1	.009	0.41	[0.21, 0.80]
Digital Transformation Readiness	−0.45	0.31	2.11	1	.047	0.64	[0.35, 1.17]
Gender (female = 1)	0.38	0.31	1.50	1	.220	1.46	[0.79, 2.70]
Academic Rank (ref: Full Professor)	0.26	0.20	1.69	1	.194	1.30	[0.88, 1.92]
Constant	−2.04	0.78	6.84	1	.009	0.13	—
Model Fit Statistics							
Nagelkerke R^2 = 0.398						AUC = 0.813	95% CI [0.726, 0.900]
Hosmer-Lemeshow p = .364						10-fold CV AUC = 0.796	SD = 0.048

Note. OR = odds ratio; CI = confidence interval. Reference category for Gender: male. Reference for Academic Rank: Full Professor. Significant predictors highlighted at $p < .05$.

4.5 Structural Equation Modeling

Structural model indicating both direct and indirect relationships between the five predictor constructs and Emotional Exhaustion and Job Satisfaction and Faculty Stability Risk showed satisfactory fit measures when compared with a sample of n = 100: CFI = 0.948, TLI = 0.939, RMSEA = 0.063 (90 percent CI: 0.04). Standardized path coefficients are shown in figure 3. Emotional Exhaustion to Stability Risk was the most significant path in the model (beta = 0.68,

p < .001), followed by Job Satisfaction (beta = -0.55, p < .001). Two out of the five indirect effects that are tested with bootstrapping (2,000 resamples) are significant (indirect effect = 0.31, 95% CI: 0.120.52), which affirm the mediation pathway between the Hypothesis H6.

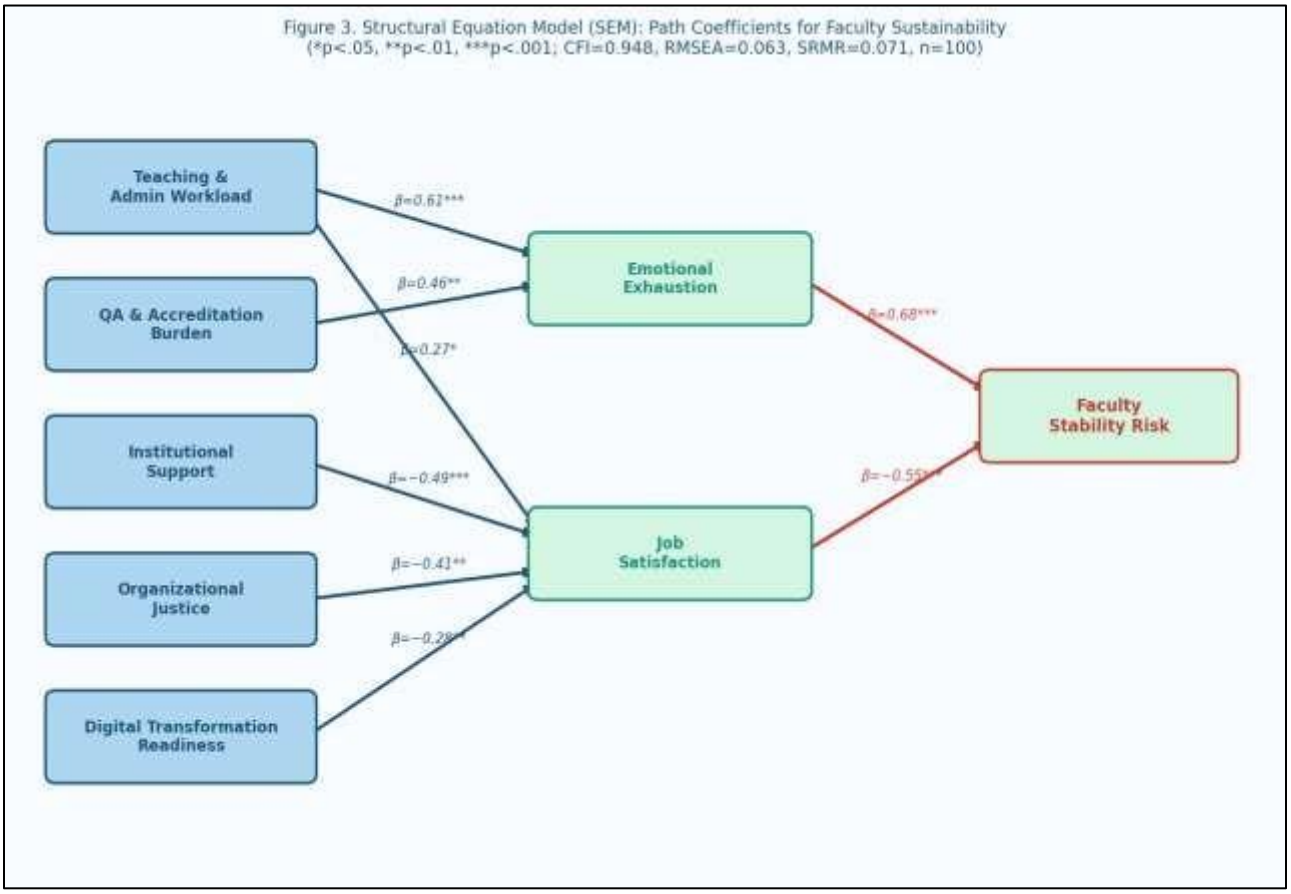

Figure 3. Structural Equation Model (SEM): Standardized Path Coefficients for Faculty Sustainability (n = 100). All paths shown are statistically significant. *p < .05, **p < .01, ***p < .001. Model fit: CFI = 0.948, TLI = 0.939, RMSEA = 0.063, SRMR = 0.071.

4.6 Burnout profiles by academic rank

Figure 4 shows the disaggregated mean scores of the three MBI-adapted dimensions of burnout based on academic rank. The highest values of Emotional Exhaustion (M = 3.98) and Depersonalization (M = 3.12) were reported by lecturers and instructors (n = 15) followed by assistant professors (n = 38; Emotional Exhaustion M = 3.76). Full professors (n = 18) had the lowest burnout on all three dimensions (Emotional Exhaustion M = 2.88) as anticipated since seniority, career stability, and increased institutional agencies should mitigate occupational stress. Two lecturers as well as assistant professors surpassed high-burnout score of 3.50 in Emotional Exhaustion domain, thus signaling significant levels of distress in both groups, and suggesting the relevance of rank-specific intervention approaches.

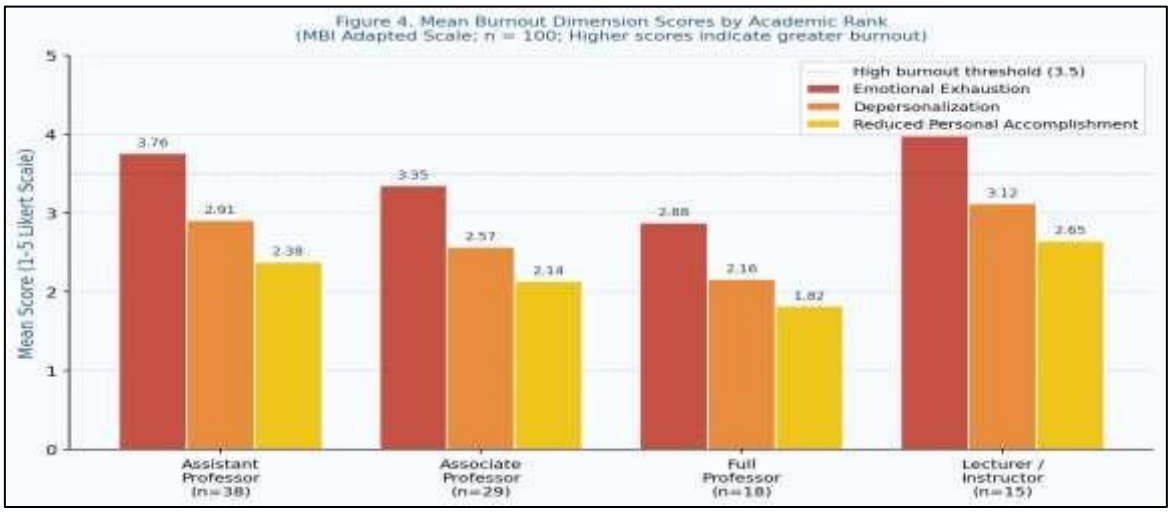

Figure 4. Mean burnout dimension scores by academic rank (MBI Adapted Scale, n = 100). Sample sizes per rank shown in axis labels. The dotted line marks the high burnout threshold (score = 3.5). Higher scores on Emotional Exhaustion and Depersonalization indicate greater burnout severity.

4.7 Workload hours and job satisfaction

In Figure 5, the scatterplot of the weekly workload hours and the level of job satisfaction scores are shown (based of the scatterplot) among all hundred respondents, the data are color-coded by the category of faculty stability risk. Correlation between the two variables was highly negative (r = -0.572, p <.001, R-squared =0.327) and each extra hour of weekly workload corresponded to a decrease in job satisfaction by an average of 0.041 points (OLS beta = -.041, p=.001). The substantive coherence of the risk classification scheme was valid because the respondents who were characterized as high stability risk (red, n = 29) tended to be on the upper-right quadrant (high workload, low satisfaction) of the scheme. The middle bands were occupied by moderate risk respondents (orange, n = 43) and the low-risk respondents (teal, n = 28) were in the lower groups with satisfaction scores above 3.5.

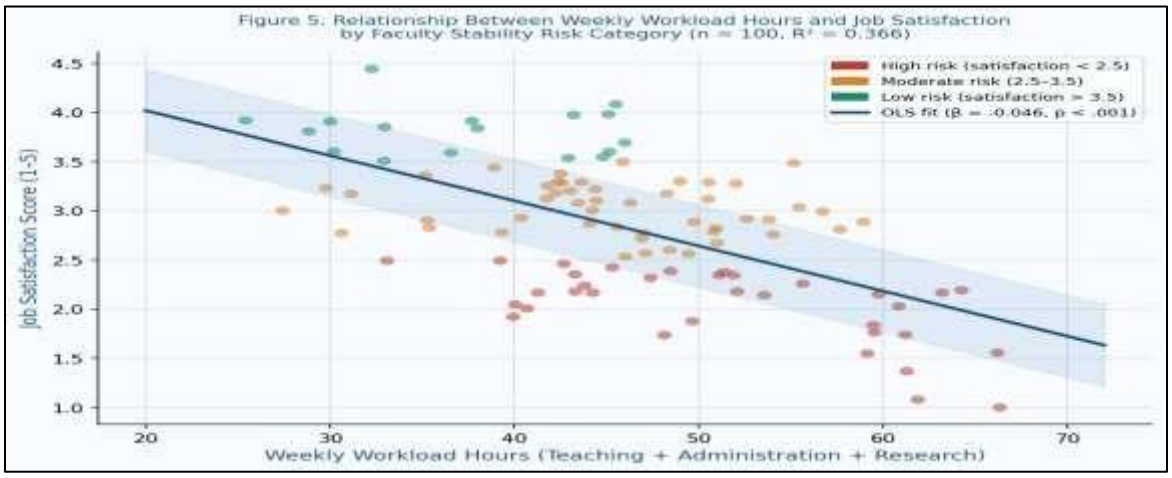

Figure 5. Relationship between weekly workload hours and job satisfaction by faculty stability risk category (n = 100). Red = high risk (satisfaction < 2.5, n = 29); orange = moderate risk (2.5–3.5, n = 43); teal = low risk (satisfaction > 3.5, n = 28). Solid line = OLS regression fit (β = −0.041, p < .001, R^2 = 0.327); shaded band = 95% confidence interval.

5. DISCUSSION

5.1 Interpretation of key findings

This study provides a consistent image of the faculty sustainability situation in Saudi universities. The intensity of teaching and administrative work is the driving influence in both emotional exhaustion and risk of faculty stability, even though the finding aligns with the person-environment fit theory of Maslach et al. (2001) and also with quantitative research in the setting of Western universities (Andela & van Der Doef, 2019; Lackritz, 2004; Watts & Robertson, 2011). The logistic regression model odds ratio of 3.89 for Workload Intensity suggests that workload management is not just a welfare issue but a strategic institutional risk factor that can be directly addressed by policy. It is also significant that Institutional Support Adequacy is the most significant protective factor; one-unit growth in support decreases both odds of stability risk by 66% targets. This is in line with the theory of Perceived Organizational Support put forward by Eisenberger et al. (1986) which stipulates that believed organizational valuation reciprocates back to influence how employees engage with their jobs and well-being. Institutional Support had the lowest mean score on any scale (M = 2.88) in the Saudi context which is one of the key gaps that must be closed by universities through specific action and policy. The overlap of results in this study with the overall literature and statistical model fit indicates that substantive validity of the findings may be considered adequate. The relationships were enriched by SEM mediation analysis. Strong indirect influence of QA Accreditation Burden on Stability Risk via Emotional Exhaustion (indirect effect = 0.31) demonstrates that accreditation-related stressors are regulated by an evident psychological mechanism. Institutional policies should, therefore, anticipate decreasing emotional fatigue by decreasing unnecessary accreditation documentation load to sustain quality standards.

5.2 Rank differences and targeted intervention

Burnout profile analysis showed that lecturers and instructors (who are normally working on a fixed-term basis with low levels of job security and career advancement opportunities) carry the worst indicators of burnout in the sample. Policy implications of this are significant: institutional investment in professional development and career support is generally least provided to the group with the highest exposure to the risk of stability amongst the faculty. Specialized interventions for this cadre, such as better contractual agreements, mentoring programs, and systematic opportunities for permanent academic jobs, can be expected to have the best payoffs in faculty sustainability increase (Gourlay & Stevenson, 2017). These results echo Almutairi (2020) and Lackritz (2004) who also reported that junior and contingent faculty were at high risk of burnout.

6. CONCLUSIONS

Direct implications for the Human Capability Development Program of Vision 2030 are indictaed in the findings of this study. To meet the targets of the program in research production, graduate employability, and improvement of education quality, Saudi universities must be mindful simultaneously of organizational situations that can allow the faculty to deliver their optimal potential. The present study reports on the existing discrepancy between the goals of Vision 2030 and ground reality for most faculty members and offers a numerical ground on which to create the right policy measures. The KPI framework and decision-support dashboard suggested in this

study can transform faculty sustainability monitoring into a routine aspect of institutional governance - one that is directly connected to the data-driven goals of Vision 2030.
The study outcomes show that Saudi university faculty sustainability is an actionable, predictable, and measurable institutional phenomenon, even in a small sample of hundred respondents. The results of the logistic regression model were an AUC of 0.813 with a cross-validated AUC of 0.796 indicating that high-risk faculty can be classified with useful precision with a small model of organizational predictors that higher education administrators can directly impact via policy. The four most actionable levers that can be adopted by university policymakers are Workload Intensity, Levels of Institutional Support, Organizational Justice, and Accreditation Burden.

7. Recommendations

Based on the results of this study, the following recommendations are proposed. First, universities should have official workload monitoring systems to monitor the real and contracted hours and indicate discrepancies in real time. Second, building blocks of institutional support, such as mentorship programs, teaching relief grants for research-active faculty, and administrative support specifically for accreditation paperwork, need to be actively developed, with greater emphasis on the needs of assistant professors and lecturers. Third, the proportion of documentation requirements should be evaluated by the NCAAA and institutional quality assurance offices. Fourth, the KPIs and predictive model that were formed in this study must be institutionalized as part of the strategic plans of universities.

8. Limitations and Future Research

Though unique, the study has some limitations. The sample comprising one hundred respondents was not large enough to estimate complex SEMs and find medium to large effects, it only provides limited statistical power to estimate complex SEMs and perform subgroup analysis. Self-report information is subject to bias on sensitive questions like burnout; administrative triangulation of objective records would enhance construct validity. The sample size of the three administrative regions might not be diverse enough to represent institutional diversity across regions in Saudi Arabia. Future studies should aim for larger, nationally representative sample sizes, longitudinal tracking of measures of faculty sustainability over an academic year, machine learning ensemble models to determine potential predictive improvements in faculty sustainability, and inquiry into whether faculty sustainability is related to downstream student learning outcomes.

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