



LEADERSHIP, GROUP DYNAMICS, AND LECTURERS' JOB STRESS IN PRIVATE ISLAMIC HIGHER EDUCATION INSTITUTIONS: A QUANTITATIVE STRUCTURAL ANALYSIS

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Received: 04 July 2026

Accepted: 13, September 2026

Published: 21, September 2026

Abstrak

Penelitian ini menganalisis hubungan statistik antara kepemimpinan, dinamika kelompok, dan stres kerja dosen pada perguruan tinggi Islam swasta di bawah naungan Kopertais Wilayah IX, Sumatera Utara. Penelitian menggunakan pendekatan kuantitatif dengan desain survei cross-sectional. Populasi terdiri atas 272 dosen tetap dari tujuh perguruan tinggi Islam swasta, dengan 183 responden yang dipilih melalui simple random sampling. Data dikumpulkan menggunakan kuesioner skala Likert lima poin dan dianalisis melalui statistik deskriptif, uji prasyarat, korelasi Pearson, dan analisis jalur. Hasil menunjukkan bahwa kepemimpinan memiliki hubungan langsung yang signifikan dengan stres kerja dosen (koefisien jalur = 0,243; $t = 3,390$), dengan kontribusi langsung yang dilaporkan sebesar 5,9%. Dinamika kelompok juga menunjukkan hubungan langsung yang signifikan dengan stres kerja dosen (koefisien jalur = 0,304; $t = 4,311$), dengan kontribusi langsung sebesar 9,2%. Kontribusi dinamika kelompok secara numerik lebih besar daripada kepemimpinan. Temuan ini menunjukkan bahwa stres kerja dosen berkaitan dengan faktor organisasi pada tingkat vertikal (kepemimpinan) dan horizontal (interaksi kelompok). Secara teoretis, temuan memperluas penerapan Job Demands–Resources Model pada konteks perguruan tinggi Islam swasta dengan menempatkan dukungan kepemimpinan dan kualitas relasi kolegal sebagai sumber daya organisasi yang potensial, sementara kepemimpinan yang tidak suportif dan interaksi kelompok yang disfungsi dapat menjadi sumber tuntutan kerja. Karena desain penelitian bersifat cross-sectional dan berbasis self-report, temuan ditafsirkan sebagai hubungan/prediksi statistik dan bukan sebagai bukti kausalitas eksperimental.

Kata Kunci: Kepemimpinan organisasi; dinamika kelompok; stres kerja akademik; dosen; manajemen pendidikan tinggi; Job-Demands Resources Model



Abstract

This study examined the statistical relationships among leadership, group dynamics, and lecturers' job stress in private Islamic higher education institutions under Kopertais Region IX, North Sumatra. A quantitative cross-sectional survey design was employed. The population consisted of 272 permanent lecturers from seven private Islamic higher education institutions, from which 183 respondents were selected through simple random sampling. Data were collected using five-point Likert-scale questionnaires and analyzed using descriptive statistics, prerequisite tests, Pearson correlation, and path analysis. The results showed a significant direct statistical relationship between leadership and lecturers' job stress (path coefficient = 0.243; $t = 3.390$), with a reported direct contribution of 5.9%. Group dynamics also showed a significant direct statistical relationship with lecturers' job stress (path coefficient = 0.304; $t = 4.311$), with a reported direct contribution of 9.2%. The numerical contribution of group dynamics was greater than that of leadership. These findings indicate that lecturers' job stress is associated with both vertical organizational conditions represented by leadership and horizontal collegial conditions represented by group dynamics. Theoretically, the findings extend the application of the Job Demands–Resources Model to private Islamic higher education by highlighting leadership and collegial relationships as organizational and social resources, while unsupportive leadership and dysfunctional group interaction may constitute additional job demands. Because the study used a cross-sectional, self-report design, the findings should be interpreted as statistical associations/predictions rather than definitive experimental causal effects.

Keywords: Organizational leadership; group dynamics; academic work stress; lecturers; higher education management; Job Demands–Resources Model.

INTRODUCTION

Higher education institutions face increasingly complex demands associated with digital transformation, accreditation, research productivity, scholarly publication, community engagement, and continuous quality improvement. These demands are particularly salient for lecturers, whose professional roles combine teaching, research, community service, student supervision, institutional administration, and participation in academic governance. When occupational demands exceed the time, autonomy, social support, and other resources available to lecturers, psychological strain and job stress may emerge. The transactional perspective of stress emphasizes that stress depends not only on objective conditions but also on how individuals appraise demands and their coping resources (Lazarus & Folkman, 1984). The Job Demand-Control Model similarly links high demands and limited decision latitude to psychological strain (Karasek, 1979), while the Job Demands–Resources (JD-R) Model explains how excessive demands produce strain when they are not balanced by adequate job resources such as autonomy, role clarity, social support, and supportive leadership (Bakker & Demerouti, 2007; Bakker et al., 2023).

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The academic profession is especially vulnerable to occupational stress because lecturers routinely manage overlapping performance expectations, deadlines, administrative work, research and publication targets, and student-related responsibilities. Recent scholarship continues to document the importance of organizational resources, work engagement, resilience, and psychosocial working conditions in understanding academic work stress. These conditions make leadership and collegial relationships important organizational factors rather than merely background characteristics. In this perspective, job stress should be examined as an organizational phenomenon that emerges from the interaction between job demands and the resources available to academic staff.

This issue is particularly relevant in private Islamic higher education institutions under Kopertais Region IX, North Sumatra. Such institutions operate at the intersection of academic and administrative demands, national higher-education standards, institutional accreditation, competition for students and resources, and the normative expectations associated with Islamic educational missions. The Islamic institutional context is therefore theoretically relevant because leadership and collegial interaction may be interpreted not only through formal organizational roles but also through expectations concerning trust, fairness, cooperation, responsibility, and shared institutional values. Differences in institutional resources and management capacity may further shape how lecturers experience organizational demands and available resources. Accordingly, the setting provides an opportunity to examine occupational stress beyond the more commonly studied public or general higher-education context.

Leadership is one organizational condition through which job demands and resources are structured. Leaders influence role clarity, communication, workload coordination, participation in decision-making, access to resources, recognition, and conflict management. Supportive leadership can therefore operate as a job resource by helping lecturers understand expectations and obtain assistance when demands become difficult to manage. Conversely, inconsistent communication, limited participation, perceived unfairness, or insufficient support may increase uncertainty and psychological pressure. Previous higher-education research has linked leadership style with academic staff well-being, satisfaction, burnout, and work-related stress (Alonderiene & Majauskaite, 2016; Hidayat et al., 2019; Boamah, 2022). More broadly, research synthesized in organizational psychology indicates that leadership behavior is associated with employees' affective well-being and psychosocial working conditions (Skakon et al., 2010; Arnold, 2021).



Leadership represents an important organizational mechanism through which institutional demands are translated into roles, responsibilities, communication patterns, and professional support. Evidence from Islamic educational institutions indicates that leadership becomes more effective when supervision is implemented through collaborative professional dialogue, constructive feedback, and continuous assistance rather than merely through administrative control (Iman et al., 2026). Such practices are relevant to higher education because supportive leadership may help academic staff interpret organizational demands, coordinate responsibilities, and access resources necessary to perform their professional roles.

Group dynamics represent a second organizational level that may shape lecturers' exposure to and ability to cope with job demands. Lecturers work through study programs, faculties, research teams, curriculum groups, accreditation committees, and community-service teams. These settings require communication, participation, role coordination, shared norms, cohesion, mutual assistance, and constructive conflict management. Positive group dynamics can function as social resources by facilitating information sharing, emotional support, collaborative problem solving, and collective coping. Conversely, role ambiguity, interpersonal conflict, unhealthy competition, poor communication, and weak cohesion may become social demands that intensify strain. Research on university teacher teams and scientific teams demonstrates the importance of team leadership, team learning, fit, cohesion, and interpersonal processes for academic teamwork and well-being (Koeslag-Kreunen et al., 2018; Klaic et al., 2018; Paganin et al., 2023).

Leadership and group dynamics should therefore be considered related but distinct organizational mechanisms. Leadership primarily represents the vertical relationship between lecturers and institutional authorities, whereas group dynamics represent horizontal relationships among colleagues. Leadership can shape the conditions under which groups communicate, distribute roles, participate in decisions, and resolve conflicts. At the same time, group processes may influence how institutional decisions are interpreted and implemented. The JD-R framework provides a useful synthesis: supportive leadership and constructive collegial relationships may constitute organizational and social resources, while ineffective leadership and dysfunctional group interaction may constitute additional demands. Examining both predictors simultaneously can therefore provide a more complete organizational explanation of lecturer job stress than focusing on either level alone.

Despite this theoretical relevance, several gaps remain in the literature. First, many studies examine leadership in relation to satisfaction, performance, organizational



commitment, burnout, or turnover rather than lecturer job stress as the primary outcome. Second, research on academic teams frequently focuses on team effectiveness, learning, or performance, while the stress implications of everyday group dynamics receive less attention. Third, relatively limited quantitative evidence simultaneously models leadership and group dynamics as predictors of job stress among lecturers in private Islamic higher education institutions. Recent international work using quantitative and structural approaches further indicates the value of examining occupational stress through integrated organizational models, but the private Islamic higher-education context in North Sumatra remains underrepresented.

This study addresses these gaps by examining the statistical relationships of leadership and group dynamics with lecturers' job stress in seven private Islamic higher education institutions under Kopertais Region IX, North Sumatra. The study asks: (1) Is leadership significantly associated with lecturers' job stress? (2) Are group dynamics significantly associated with lecturers' job stress? and (3) Do leadership and group dynamics jointly explain variation in lecturers' job stress? The study is positioned primarily within the JD-R perspective and uses leadership and group dynamics as two organizational levels through which job resources and demands may be experienced.

The study offers two principal contributions. Theoretically, it extends the application of occupational-stress theory to a private Islamic higher-education setting by bringing vertical leadership conditions and horizontal group processes into one statistical model. Empirically, it compares the relative direct path coefficients of the two organizational predictors. Practically, the findings can inform institutional efforts concerning participatory communication, fair task allocation, teamwork, conflict management, role clarity, and lecturer support. Because the research is cross-sectional and non-experimental, however, the findings are interpreted as statistical relationships rather than definitive causal mechanisms.

LITERATURE REVIEW

Occupational Stress and the JD-R Perspective

Occupational stress can be understood as psychological strain arising when work demands are appraised as exceeding available coping capacity or resources. Lazarus and Folkman (1984) emphasize appraisal and coping, while the JD-R Model distinguishes between job demands that require sustained effort and job resources that help employees achieve goals, reduce demands, or stimulate growth (Bakker & Demerouti, 2007). Contemporary JD-R scholarship further emphasizes that burnout and well-being are shaped by the dynamic balance between demands, resources, and self-regulation (Bakker



& de Vries, 2021; Bakker et al., 2023). In higher education, workload, time pressure, role conflict, administrative demands, and performance expectations can operate as demands, whereas autonomy, social support, leadership support, and clear roles can function as resources. For lecturers, this framework is useful because academic work combines professional autonomy with substantial performance and administrative expectations. Stress is therefore not necessarily a direct consequence of workload alone; it may depend on whether lecturers have sufficient organizational and social resources to meet those demands. This distinction is important for the present study because leadership and group dynamics can plausibly operate as organizational resources or, when dysfunctional, as additional sources of demand.

Leadership as an Organizational Resource

Leadership is the process through which individuals influence, direct, support, and coordinate others toward shared organizational objectives (Yukl, 2013). In higher education, leadership encompasses more than formal authority: academic leaders influence communication, participation, role clarity, resource allocation, professional development, recognition, and conflict management. Transformational and supportive leadership perspectives emphasize vision, individualized consideration, intellectual stimulation, trust, and motivation (Bass, 1999). Empirical studies have linked leadership with academic staff well-being, satisfaction, and burnout (Alonderiene & Majauskaite, 2016; Nielsen et al., 2009; Boamah, 2022). From the JD-R perspective, leadership becomes a job resource when it helps lecturers interpret demands, access resources, coordinate workloads, and receive social or professional support. The expected relationship is therefore sensitive to how leadership is measured and coded. If higher scores represent more supportive/effective leadership, a negative relationship with stress would generally be expected; if higher scores represent problematic leadership conditions or if stress items are reverse-coded differently, the statistical direction can differ. Accordingly, the direction of the empirical coefficient must be interpreted in accordance with the actual questionnaire coding rather than assumed from theory. Leadership represents an important organizational mechanism through which institutional demands are translated into roles, responsibilities, communication patterns, and decision-making processes. In Islamic educational institutions, adaptive leadership and effective management are increasingly important in responding to organizational and technological changes, while collaboration among educational stakeholders constitutes an important component of institutional development (Nurdiana et al., 2025). From the Job Demands–Resources perspective, such leadership practices may function as



organizational resources when they provide clarity, support, coordination, and access to resources.

Group Dynamics as a Social Resource or Demand

Group dynamics refers to the patterns of interaction, roles, norms, communication, cohesion, participation, and conflict that develop among members of a group (Cartwright & Zander, 1968; Johnson & Johnson, 1997). In academic organizations, lecturers depend on colleagues for information, coordination, peer feedback, shared problem solving, and emotional support. Positive group dynamics can therefore function as social resources. Conversely, conflict, exclusion, unclear responsibilities, poor communication, and weak cohesion can increase interpersonal demands and psychological strain. The social-support literature reinforces this interpretation. Coworker relationships can influence attitudes, perceptions, performance, and well-being through both supportive and adverse interactions (Chiaburu & Harrison, 2008). Research on academic teams similarly identifies team leadership, participation, communication, learning processes, team fit, and cohesion as important conditions for effective and healthy teamwork (Klaic et al., 2018; Koeslag-Kreunen et al., 2018; Paganin et al., 2023). The present study extends this line of inquiry by treating group dynamics as a direct organizational predictor of lecturers' job stress.

Theoretical Integration and Conceptual Model

The integrated framework proposes that lecturers experience job stress through a balance between occupational demands and organizational/social resources. Leadership represents a vertical organizational resource or demand, while group dynamics represent a horizontal social resource or demand. The conceptual relationship can be expressed as: Leadership and Group Dynamics → Organizational/Social Conditions → Lecturers' Job Stress. Supportive leadership and constructive group processes are expected to facilitate coping, role clarity, and resource access; dysfunctional conditions may increase uncertainty, conflict, and strain. Because the present study uses cross-sectional survey data, this framework is treated as a theoretical explanation for statistical prediction rather than proof of temporal causality.

RESEARCH METHODS

Research Design

This study employed a quantitative approach using a cross-sectional survey design. The original study applied path analysis to examine the direct and indirect relationships among leadership, physical work environment, group dynamics, work



morale, and lecturers' job stress. However, the present article focuses specifically on three variables: leadership, group dynamics, and lecturers' job stress. Therefore, the original model was reduced to a single structural model examining the partial and simultaneous effects of leadership and group dynamics on lecturers' job stress. A quantitative cross-sectional survey design was considered appropriate because the study sought to describe the empirical conditions of the research variables and statistically test the hypothesized relationships among them. Path analysis was used to estimate the magnitude and direction of the effects of the exogenous variables on the endogenous variable based on the observed correlation structure (Kusnendi, 2005). In the reduced model, leadership and group dynamics were positioned as exogenous variables, while lecturers' job stress was treated as the endogenous variable.

Research Setting and Period

The study was conducted at seven private Islamic higher education institutions under Kopertais Region IX, North Sumatra. The institutions included STAI Al-Hikmah Medan, STIT Al Jam'iyatul Washliyah Kota Binjai, STAI Raudhatul Akmal Deli Serdang, Institut Ilmu Keislaman Jam'iyah Mahmudiyah Langkat, Institut Agama Islam Padang Lawas, STIT Al-Bukhary Labuhanbatu, and STAI Bahriyatul Ulum Pandan. These institutions were selected because they actively conducted academic activities, including lectures, seminars, institutional administration, research, and other academic programs. The selection of active institutions was intended to ensure that the participating lecturers were working under actual organizational and academic conditions. Consequently, the collected data were expected to reflect the leadership practices, group interactions, and occupational pressures experienced by lecturers in their daily work. The research was conducted from September to December 2025. This period was selected because most lecturers were actively involved in academic activities, thereby facilitating direct questionnaire administration and increasing the relevance of the data to the lecturers' actual working conditions.

Population and Sample

The population consisted of all active permanent lecturers employed at the seven participating private higher education institutions. The total population was 272 lecturers. A population refers to the entire group possessing the characteristics relevant to a study, while a sample represents a proportion of that population selected for empirical investigation (Sugiyono, 2012). The sample size was determined using the Harry King nomogram. At a 5% error level, the nomogram indicated that approximately 67% of the population should be selected. The calculated sample size was rounded to 183



respondents. Accordingly, the study involved 183 permanent lecturers. Respondents were selected using simple random sampling, thereby providing members of the population with an opportunity to be included in the sample.

Research Variables

The study examined three variables. Leadership and group dynamics served as the predictor or exogenous variables, while lecturers' job stress served as the outcome or endogenous variable. Leadership was operationally defined as a set of behaviors demonstrated by institutional leaders in directing, motivating, influencing, supporting, and guiding lecturers to achieve institutional objectives. Leadership was measured through the leader's ability to provide direction, communicate effectively, motivate lecturers, make decisions, demonstrate integrity, manage organizational resources, and develop cooperation. Group dynamics were operationally defined as patterns of social interaction and reciprocal relationships among lecturers that influenced communication, participation, role distribution, cohesion, cooperation, and group effectiveness. The variable was measured through shared group objectives, role structure, member participation, interpersonal communication, cohesion, group norms, and member satisfaction. Lecturers' job stress was operationally defined as a condition of psychological, emotional, behavioral, or physical tension resulting from occupational demands perceived to exceed the lecturers' available abilities or resources. It was measured through excessive workload, time pressure, multiple role demands, work conflict, insufficient organizational support, career uncertainty, psychological consequences, and physical consequences.

Measurement Instrument and Quality Assurance

The manuscript specifies the constructs and their operational indicators but does not provide sufficient archival information in the submitted version to reproduce the original item-level validation statistics. The revised manuscript therefore does not invent item counts, validity coefficients, Cronbach's alpha values, or common-method-bias statistics. These statistics should be inserted from the original questionnaire/output before final submission. At minimum, the final manuscript should report the source or adaptation of each scale, the number of items per construct, the response format, the item-level or construct-level validity procedure, reliability coefficients (e.g., Cronbach's alpha), and any assessment of common method bias. If the scales were developed by the researchers, the item-development and pilot-testing procedures should also be documented.



Data Analysis

The data were first analyzed using descriptive statistics to summarize the empirical characteristics of each variable. The descriptive analysis included the minimum score, maximum score, mean, median, mode, standard deviation, and frequency distribution. The tendency of each variable was also categorized using the ideal mean and ideal standard deviation, following the procedures applied in the original study (Arikunto, 2005; Sudjana, 2002). Before hypothesis testing, the data were subjected to prerequisite tests. Data normality was examined using the Lilliefors test. The data were considered normally distributed when the calculated Lilliefors value was lower than the critical value at the 5% significance level (Sudjana, 1992). The linearity and significance of the regression relationships between each exogenous variable and lecturers' job stress were tested using analysis of variance. The regression equation was considered significant when the calculated F-value exceeded the critical F-value, while the relationship was considered linear when the lack-of-fit test did not indicate a significant deviation from linearity (Sudjana, 1992). Homogeneity of variance was examined using Bartlett's test. The variance was considered homogeneous when the calculated chi-square value was lower than the critical chi-square value at the 5% significance level (Sudjana, 1989). The relationships among the variables were also examined using the Pearson Product-Moment correlation.

Path Analysis Model

The reduced structural model estimated the direct paths from leadership (X1) and group dynamics (X2) to lecturers' job stress (Y). The structural form can be represented as $Y = \rho_{Y1X1}X1 + \rho_{Y1X2}X2 + \varepsilon$, where ρ denotes standardized path coefficients and ε represents the unexplained component. Because the correlation between leadership and group dynamics was not statistically significant ($r = 0.115$), the two predictors were retained as conceptually distinct constructs in the model. The final report should additionally provide the overall multiple R^2 (or coefficient of determination) for the simultaneous model if available from the original analysis output.

RESULTS AND DISCUSSION

Results

The analysis was conducted using data obtained from 183 lecturers. The variables presented in this article were leadership, group dynamics, and lecturers' job stress. The findings are presented through descriptive statistics, prerequisite tests, correlation analysis, and path analysis.



Descriptive Statistical Results

Descriptive statistics included the minimum score, maximum score, mean, standard deviation, median, and mode. The results are presented in Table 2.

Table 2. Descriptive Statistics of the Research Variables

Variable	N	Minimum	Maximum	Mean	Standard Deviation	Median
Leadership	183	235	300	267.59	16.73	267
Group dynamics	183	85	129	109.45	13.74	108
Lecturers' job stress	183	89	141	114.40	14.28	114

As shown in Table 2, leadership scores ranged from 235 to 300, with a mean of 267.59 and a standard deviation of 16.73. The median and mode were both 267. Group dynamics scores ranged from 85 to 129, with a mean of 109.45 and a standard deviation of 13.74. The median was 108, while the mode was 106. Lecturers' job stress scores ranged from 89 to 141, with a mean of 114.40 and a standard deviation of 14.28. The median was 114, while the mode was 113.

The frequency distribution of leadership indicated that 81 respondents, or 44.3%, had scores below the mean class interval; 38 respondents, or 20.8%, were in the mean class interval; and 64 respondents, or 35.0%, had scores above the mean class interval. For group dynamics, 65 respondents, or 35.5%, had scores below the mean class interval; 29 respondents, or 15.8%, were in the mean class interval; and 89 respondents, or 48.6%, had scores above the mean class interval. For lecturers' job stress, 82 respondents, or 44.8%, had scores below the mean class interval; 29 respondents, or 15.8%, were in the mean class interval; and 72 respondents, or 39.3%, had scores above the mean class interval.

Normality Test Results

The normality of the estimated residuals was examined using the Lilliefors test at a significance level of 0.05. The results relevant to the variables examined in this article are presented in Table 3.

Table 3. Normality Test Results

Estimated residual	L observed	L critical	Result
Job stress on leadership	0.057	0.065	Normal
Job stress on group dynamics	0.038	0.065	Normal

The L Observed Value For Job Stress On Leadership Was 0.057, Which Was Lower Than The Critical Value Of 0.065. The L Observed Value For Job Stress On Group



Dynamics Was 0.038, Which Was Also Lower Than 0.065. Therefore, Both Estimated Residual Distributions Met The Normality Requirement.

Linearity And Regression Significance Results

The Linearity And Significance Of The Relationships Between The Independent Variables And Lecturers' Job Stress Were Examined Using Analysis Of Variance. The Results Are Presented In Table 4.

Table 4. Linearity And Regression Significance Tests

Relationship	Regression F observed	Regression F critical	Lack-of-fit F observed	Lack-of-fit F critical	Result
Leadership → job stress	14.22	3.89	0.57	1.48	Significant and linear
Group dynamics → job stress	22.35	3.89	0.16	1.59	Significant and linear

For the relationship between leadership and lecturers' job stress, the simple regression equation was:

$$\hat{Y} = 52.77 + 0.23X_1$$

The regression F observed value was 14.22, which exceeded the critical value of 3.89. The lack-of-fit F observed value was 0.57, which was lower than the critical value of 1.48. Thus, the regression coefficient was statistically significant and the relationship was linear. For the relationship between group dynamics and lecturers' job stress, the simple regression equation was:

$$\hat{Y} = 69.54 + 0.41X_2$$

The regression F observed value was 22.35, which exceeded the critical value of 3.89. The lack-of-fit F observed value was 0.16, which was lower than the critical value of 1.59. Thus, the regression coefficient was statistically significant and the relationship was linear.

Correlation Analysis

Pearson Product-Moment correlation analysis was conducted to examine the relationships among leadership, group dynamics, and lecturers' job stress. At N = 183 and a significance level of 0.05, the critical correlation coefficient was 0.144 and the critical t-value was 1.653. The results are presented in Table 5.



Table 5. Correlations among Leadership, Group Dynamics, and Lecturers' Job Stress

Relationship	Correlation coefficient (r)	t observed	t critical	Result
Leadership and group dynamics	0.115	1.573	1.653	Not significant
Leadership and lecturers' job stress	0.270	3.792	1.653	Significant
Group dynamics and lecturers' job stress	0.332	4.754	1.653	Significant

The correlation between leadership and group dynamics was 0.115. The coefficient was lower than the critical correlation value of 0.144, while the observed t-value of 1.573 was lower than the critical t-value of 1.653. Therefore, the relationship between leadership and group dynamics was not statistically significant at the 0.05 level. The correlation between leadership and lecturers' job stress was 0.270. The observed t-value was 3.792, which exceeded the critical value of 1.653. Thus, leadership had a statistically significant positive correlation with lecturers' job stress. The correlation between group dynamics and lecturers' job stress was 0.332. The observed t-value was 4.754, which exceeded the critical value of 1.653. Thus, group dynamics had a statistically significant positive correlation with lecturers' job stress.

Hypothesis Testing

The direct effects of leadership and group dynamics on lecturers' job stress were tested using path analysis. Statistical decisions were made by comparing the observed t-value with the critical t-value of 1.653 at the 0.05 significance level. The results are presented in Table 6.

Table 6. Direct Effects on Lecturers' Job Stress

Hypothesized path	Path coefficient	t observed	t critical	Reported direct contribution	Decision
Leadership → lecturers' job stress	0.243	3.390	1.653	5.9%	Significant



Group dynamics → lecturers' job stress	0.304	4.311	1.653	9.2%	Significant
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DISCUSSION

This discussion interprets the two direct effects reported in the dissertation: the effect of leadership on lecturers' job stress and the effect of group dynamics on lecturers' job stress. The reported coefficients and contribution values are retained without modification. Leadership had a path coefficient of 0.243 with a direct contribution of 5.9%, whereas group dynamics had a path coefficient of 0.304 with a direct contribution of 9.2%. Both effects were statistically significant.

Leadership and Lecturers' Job Stress

The findings showed that leadership had a statistically significant direct effect on lecturers' job stress, with a path coefficient of 0.243, a t-value of 3.390, and a reported direct contribution of 5.9%. This result indicates that leadership practices constitute one of the organizational factors associated with variations in the job stress experienced by lecturers. Leadership in higher education is not limited to formal authority or administrative control. It includes the ability of institutional leaders to provide direction, communicate organizational expectations, distribute responsibilities, support lecturers' professional development, make fair decisions, and respond to academic difficulties. When these functions are not carried out effectively, lecturers may experience uncertainty, role ambiguity, limited organizational support, and greater psychological pressure. The relatively modest contribution of 5.9% indicates that leadership is important but is not the sole determinant of lecturers' job stress. Academic workload, publication demands, administrative responsibilities, career uncertainty, institutional resources, and personal coping capacity may also influence the level of stress experienced by lecturers. The finding should therefore be understood as evidence that leadership forms one component of a broader organizational system affecting academic well-being.

The positive path coefficient indicates that the observed leadership and job-stress scores moved in the same statistical direction within the estimated model. Substantively, however, the dissertation interprets the relationship in terms of the quality of leadership practices: ineffective, unsupportive, and poorly communicated leadership may intensify job stress, whereas participatory and supportive leadership may help lecturers manage occupational pressure. Consequently, the final interpretation must remain consistent with the direction in which the questionnaire items were coded.



Relationship with Organizational and Stress Theories

The finding is consistent with the Job Demands Resources Model, which positions leadership support as an organizational resource that helps employees deal with demanding work conditions. Leaders can reduce the adverse consequences of job demands by clarifying roles, coordinating workloads, facilitating access to resources, and providing professional and emotional support (Bakker & Demerouti, 2007). Conversely, leadership practices that create ambiguity, conflict, or unequal treatment may operate as additional job demands. The finding can also be explained through the transactional theory of stress. According to this perspective, occupational stress arises from individuals' appraisal of the relationship between environmental demands and the resources available to address them (Lazarus & Folkman, 1984). Leadership affects this appraisal because leaders influence the availability of information, decision-making autonomy, organizational support, and assistance in dealing with difficult tasks. Lecturers may perceive demanding academic responsibilities as more manageable when institutional leaders provide clear guidance and adequate support. Transformational leadership theory similarly emphasizes the role of leaders in providing an inspiring vision, intellectual stimulation, individualized consideration, and exemplary conduct (Bass, 1999). These leadership behaviors can strengthen trust and give lecturers a clearer sense of purpose. However, transformational expectations that are not accompanied by sufficient resources may also be perceived as additional pressure. Therefore, effective leadership must balance institutional performance expectations with concern for lecturers' psychological well-being.

Comparison with Previous Research

The present finding supports previous evidence showing that leadership is related to stress and psychological well-being in academic and professional settings. Research involving university lecturers in Indonesia demonstrated that transformational leadership and academic culture were associated with lecturers' work stress (Hidayat et al., 2019). This similarity indicates that leadership remains relevant to occupational stress in the Indonesian higher education context. The finding is also consistent with a systematic review reporting that leaders' behavior and leadership style are associated with employees' affective well-being (Skakon et al., 2010). Leaders who communicate effectively, provide social support, and involve employees in decision-making tend to create healthier psychosocial working conditions. Nielsen et al. (2009) found that transformational leadership was related to psychological well-being through team- and self-efficacy mechanisms. This suggests that leadership may influence stress not only directly but also by shaping lecturers' confidence in their own abilities and in the capacity

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of their working teams. Boamah (2022) similarly found that transformational leadership had an inverse relationship with faculty burnout and that workplace culture helped explain this relationship. The present study therefore supports earlier research in recognizing leadership as a meaningful organizational factor. Nevertheless, its contribution of 5.9% shows that leadership alone cannot fully explain lecturer job stress. Leadership interventions should be accompanied by workload management, adequate facilities, professional support, and constructive academic relationships.

Group Dynamics and Lecturers' Job Stress

Group dynamics had a statistically significant direct effect on lecturers' job stress, with a path coefficient of 0.304, a t-value of 4.311, and a reported direct contribution of 9.2%. The contribution of group dynamics was numerically greater than the contribution of leadership. This result indicates that lecturers' occupational stress is influenced not only by relationships with formal leaders but also by everyday interactions with colleagues. Lecturers work in study programs, faculties, research groups, curriculum teams, accreditation committees, and community-service teams. These academic groups require communication, role coordination, mutual assistance, shared objectives, and conflict management. Healthy group dynamics can provide lecturers with emotional support, academic assistance, information, and opportunities for collaborative problem-solving. In contrast, unclear roles, unhealthy competition, interpersonal conflict, weak communication, and limited group cohesion can increase psychological tension. The finding therefore reflects the importance of the immediate social environment in which lecturers perform their academic duties. The 9.2% contribution does not mean that group dynamics independently determine all aspects of job stress. Instead, it demonstrates that group interaction represents a measurable component of lecturers' psychological working conditions. Other organizational and individual factors remain relevant.

Group Dynamics as a Social Job Resource

Within the Job Demands Resources framework, coworker support, team cohesion, communication, and collaborative relationships can be classified as social job resources. These resources assist employees in achieving work goals, dealing with occupational demands, and protecting their psychological well-being (Bakker & Demerouti, 2007). For lecturers, collegial support may reduce the burden of academic responsibilities by enabling the sharing of teaching materials, research information, administrative knowledge, and problem-solving strategies. Collaboration may also decrease feelings of isolation when lecturers encounter publication pressure, student-related problems, or institutional changes. When group relationships are weak, these potential resources



become unavailable, and lecturers must deal with their work demands individually. The finding also corresponds with social-support perspectives. Coworkers affect employees' attitudes, stress responses, and job performance through both positive and negative interactions (Chiaburu & Harrison, 2008). Positive relationships can function as a protective mechanism, whereas interpersonal conflict may become an additional source of strain.

Comparison with Previous Research

The finding is consistent with research indicating that conflict within work groups is associated with unfavorable employee and team outcomes. De Dreu and Weingart (2003) reported that relationship and task conflict were linked to lower team performance and member satisfaction. Persistent conflict may also create tension that contributes to occupational stress. Klaic et al. (2018) found that team-focused transformational leadership and team fit were related to job satisfaction and work-related strain among members of scientific teams. Their findings are relevant because academic work frequently involves teams characterized by both shared objectives and individual professional interests. Research on university teacher teams has also emphasized the importance of team leadership, participation, communication, and collaborative learning (Koeslag-Kreunen et al., 2018).

These elements are closely related to the group-dynamics indicators used in the present study, including group objectives, role structure, member participation, interpersonal communication, cohesion, group norms, and member satisfaction. Paganin et al. (2023) further demonstrated that transformational leadership and emotional processes were related to team cohesion among educators. This evidence indicates that group cohesion is not merely a structural characteristic but also a psychological process shaped by communication, emotion, and leadership. The present study extends these findings by demonstrating that group dynamics have a significant direct association with job stress among lecturers at private higher education institutions under Kopertais Region IX, North Sumatra. The relatively greater contribution of group dynamics compared with leadership suggests that lecturers' daily peer relationships warrant particular attention in institutional stress-management strategies.

Why Group Dynamics Showed the Larger Statistical Coefficient

The larger path coefficient for group dynamics (0.304) compared with leadership (0.243) should be interpreted cautiously as a difference in the strength of the estimated statistical paths, not as proof that peer relationships are universally more important than leadership. One plausible contextual explanation is the proximity and frequency of



lecturer-colleague interactions. Lecturers may encounter colleagues daily through teaching coordination, curriculum work, research, accreditation, committees, and informal problem solving, making group processes an immediate part of their working environment. In smaller private institutions, where academic and administrative roles may overlap and organizational resources can be constrained, interpersonal coordination may become especially salient. The Islamic educational context may also place normative value on cooperation, mutual responsibility, collegiality, and shared institutional purpose; when these expectations are not matched by actual group experiences, perceived strain may become more salient. These interpretations are theoretically plausible but cannot be established as mechanisms by the present cross-sectional design. Future research should directly test mediation or moderation through variables such as perceived organizational support, psychological safety, workload, role ambiguity, and institutional culture.

Relationship between Leadership and Group Dynamics

Leadership and group dynamics represent two related but distinct levels of organizational experience. Leadership concerns the formal direction, support, and decisions provided by institutional authorities, whereas group dynamics concern interaction among lecturers within academic working groups. Leadership may shape group dynamics by determining communication patterns, participation opportunities, conflict-management procedures, and the distribution of responsibilities. At the same time, group dynamics may affect how lecturers receive and implement leadership policies. A well-designed institutional policy may produce limited benefits when group relationships are characterized by distrust or conflict. Conversely, cohesive teams may help lecturers adapt to demanding organizational changes. In the reported data, the correlation between leadership and group dynamics was 0.115 and was not statistically significant at the 0.05 level. This result indicates that the two variables did not show a strong empirical relationship in the study. Therefore, leadership and group dynamics should not be treated as interchangeable constructs. Each contributed separately to lecturers' job stress. The distinction is important for institutional management. Improving leadership practices does not automatically resolve interpersonal conflict among lecturers, and strengthening teamwork does not replace the need for fair and supportive leadership. Stress-management policies should address both levels.

Scientific Contribution

This study contributes to occupational-stress research by demonstrating that lecturer job stress is associated with both vertical organizational relationships and horizontal collegial relationships. Leadership represents the vertical relationship

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between lecturers and institutional authorities, while group dynamics represent horizontal interactions among lecturers. The findings support the application of the Job Demands–Resources Model in private higher education. Leadership support and positive group interaction may function as organizational and social resources, whereas ineffective leadership and dysfunctional group interaction may become additional work demands. The study also provides contextual evidence from private higher education institutions under Kopertais Region IX, North Sumatra. Research on occupational stress has frequently examined public universities, business organizations, healthcare organizations, or general educational institutions. Evidence from private Islamic higher education broadens the institutional settings in which leadership, group processes, and academic stress can be examined.

Empirical Contribution

The empirical contribution lies in the comparison of two direct effects within the original research model:

- (1) Leadership contributed 5.9% to variations in lecturers' job stress.
- (2) Group dynamics contributed 9.2% to variations in lecturers' job stress.
- (3) The contribution of group dynamics was numerically greater than that of leadership.

These findings show that peer and team relationships deserve attention alongside formal leadership. Institutional stress interventions that focus only on leaders may overlook interpersonal and collaborative conditions within academic groups.

Implications for Institutional Leadership

Higher education leaders should develop participatory, communicative, fair, and supportive leadership practices. The following measures are particularly relevant:

- (1) Clarifying lecturers' responsibilities, performance expectations, and institutional procedures.
- (2) Involving lecturers in decisions directly affecting teaching, research, publication, and administrative work.
- (3) Providing professional and psychological support when lecturers encounter excessive academic demands.

Leaders should also ensure that task allocation is proportional and that institutional performance targets are accompanied by adequate resources. Leadership development should therefore include communication, conflict resolution, workload coordination, and employee well-being. Overall, the findings demonstrate that leadership and group dynamics are significant organizational factors in lecturers' job stress. Leadership



contributed 5.9%, while group dynamics contributed 9.2%. The findings suggest that lecturers' stress is shaped by both the institutional direction provided by leaders and the quality of everyday relationships within academic groups. The results support a comprehensive approach to academic well-being. Private higher education institutions should not rely solely on individual stress-management programs. They should also improve leadership practices, establish fair organizational systems, strengthen collegial collaboration, manage conflict constructively, and provide sufficient resources for lecturers to perform teaching, research, and community-service responsibilities.

CONCLUSION

The study found statistically significant relationships between leadership, group dynamics, and lecturers' job stress in seven private Islamic higher education institutions under Kopertais Region IX, North Sumatra. Leadership showed a standardized path coefficient of 0.243 ($t = 3.390$), corresponding to the reported direct contribution of 5.9%, while group dynamics showed a path coefficient of 0.304 ($t = 4.311$), corresponding to a reported direct contribution of 9.2%. The larger coefficient for group dynamics indicates that, within the estimated model, horizontal collegial conditions had a stronger statistical association with job stress than leadership. The findings should be interpreted as statistical relationships rather than definitive causal effects because the study used a cross-sectional, non-experimental design.

Theoretically, the findings support the usefulness of the Job Demands–Resources perspective for examining lecturer well-being in private Islamic higher education. Leadership and group dynamics can be understood as organizational and social conditions that may either provide resources for coping with academic demands or become additional sources of demand when communication, role clarity, participation, fairness, and cooperation are inadequate. The study therefore broadens occupational-stress research by considering both vertical leadership conditions and horizontal collegial relationships within a private Islamic institutional context. Practically, institutions should strengthen participatory and transparent leadership, clarify roles and performance expectations, distribute tasks fairly, improve communication, develop teamwork, and manage interpersonal conflict constructively. Stress-management strategies should not rely only on individual coping programs; organizational conditions should also be addressed. Given the relatively modest direct contributions, institutional interventions should be complemented by attention to workload, organizational support, resources, career uncertainty, and other determinants of academic stress.



Several limitations should be acknowledged. First, the cross-sectional design does not establish temporal or experimental causality. Second, the use of self-report questionnaires may introduce common method or social-desirability bias. Third, the model includes only leadership, group dynamics, and job stress and therefore does not capture other potentially important mechanisms. Fourth, the study is limited to seven private Islamic higher education institutions under one Kopertais region, which constrains generalizability. Future studies should use longitudinal, mixed-method, or multilevel designs and examine potential mediators or moderators such as perceived organizational support, workload, role ambiguity, psychological safety, resilience, organizational culture, and Islamic work values. A fully documented measurement model and a re-estimated simultaneous structural model should also be reported in future work.

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