

Original Article

The Psychological Construction of 'Adālah in Academic Workload Distribution, Physical Overexertion Prevention, and Student Well-Being: A CFA-SEM Approach

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Abstract: This study examines the psychological construct of 'adālah (justice) as an Islamic value for promoting equitable academic workload distribution and preventing excessive physical fatigue among university students. A meta-analysis was conducted using 47 articles indexed in Scopus, PsycINFO, and Web of Science (2015–2024). The concept of 'adālah was operationalized into four dimensions: Cognitive Equity (CE), Proportional Time Distribution (PTD), Physical Capacity Protection (PCP), and Just Self-Regulation (JSR). Confirmatory Factor Analysis (CFA) demonstrated good model fit (CFI = 0.96, TLI = 0.95, RMSEA = 0.048), with satisfactory validity and reliability. Structural Equation Modeling (SEM) revealed that 'adālah significantly reduced excessive physical fatigue ($\beta = -0.54$, $p < .001$) and positively enhanced students' academic well-being ($\beta = 0.63$, $p < .001$). These findings propose a psychometric model integrating Islamic justice values with psychological theory to explain equitable academic workload distribution and student well-being.

Keywords: 'adālah, academic workload, physical overexertion, CFA, SEM, student well-being, distributive justice

Abstrak: Penelitian ini mengkaji konstruksi psikologis 'adālah sebagai representasi keadilan dalam Islam untuk mendukung distribusi beban akademik yang proporsional dan mencegah kelelahan fisik mahasiswa. Penelitian menggunakan metode meta-analisis terhadap 47 artikel terindeks Scopus, PsycINFO, dan Web of Science (2015–2024). Konsep 'adālah dikembangkan ke dalam empat dimensi, yaitu cognitive equity, proportional time distribution, physical capacity protection, dan just self-regulation. Hasil Confirmatory Factor Analysis (CFA) menunjukkan model memiliki kesesuaian yang baik (CFI = 0,96; TLI = 0,95; RMSEA = 0,048), serta validitas dan reliabilitas yang memadai. Analisis Structural Equation Modeling (SEM) menunjukkan bahwa 'adālah berpengaruh negatif terhadap kelelahan fisik ($\beta = -0,54$; $p < 0,001$) dan berpengaruh positif terhadap academic well-being mahasiswa ($\beta = 0,63$; $p < 0,001$). Temuan ini menawarkan model psikometrik yang mengintegrasikan nilai keadilan Islam dengan psikologi untuk menjelaskan distribusi beban akademik dan kesejahteraan mahasiswa.

Kata Kunci: 'adālah, beban akademik, kelelahan fisik berlebihan, CFA, SEM, kesejahteraan mahasiswa, keadilan distributif

Introductions

Academic pressure within the landscape of contemporary higher education has evolved into a structural psychological problem whose intensity has continued to escalate over the past decade, marked by the accumulation of cognitive, temporal, and performative demands that are not always

proportionate to the adaptive capacities of students as learning subjects (Diabat & Bellibas, 2025; Kember & Leung, 1998). Cross-national empirical evidence demonstrates that more than 60% of university students report perceptions of disproportionality between academic workload and their physical and cognitive capacities (Pascoe et al., 2020; Robotham & Julian, 2006), a condition that implicitly reflects systemic failure in designing a fair and sustainable workload distribution system (Bakker & Demerouti, 2017; Schaufeli & Bakker, 2004). In Southeast Asia, including Indonesia, this situation has received additional confirmation through findings indicating that the prevalence of academic burnout ranges between 38–52%, with the dimension of physical exhaustion emerging as the most dominantly reported component (Pamungkas & Nurlaili, 2021; Salmela-Aro et al., 2009), thereby illustrating that the problems experienced are not merely cognitive-emotional in nature but also directly implicate students' biological capacities (Maslach et al., 2001; Maslach & Jackson, 1981). This imbalance is further exacerbated by academic workload distribution practices that fail to consider the heterogeneity of individual capacities, wherein lecture scheduling, assignment intensity, and evaluation mechanisms are frequently constructed according to uniform administrative logic rather than principles of proportionality sensitive to students' psychophysical conditions (Fooladvand et al., 2009; Yusoff et al., 2010).

Within this context, the phenomenon of physical overexertion emerges as a logical consequence of the imbalance between demands and capacities, conceptually understood as a condition in which individuals continuously force themselves to engage in physical and cognitive activities beyond the threshold of their restorative capacities (Demerouti et al., 2001; Freudemberger, 1974). Empirical literature indicates that this condition possesses strong correlations with declining academic performance, impaired sleep quality, and increased vulnerability to psychological disorders such as anxiety and depression (Auerbach et al., 2018; Liston et al., 2009), thereby positioning it as a critical indicator of dysfunctional and maladaptive academic systems (Auerbach et al., 2018; Kessler et al., 2007). Nevertheless, the majority of interventions developed thus far remain focused on individual coping strategies, such as stress management and emotional regulation, without seriously intervening in the structural dimension underlying the problem itself, namely the injustice inherent in the distribution of academic workload (Folkman, 2020; Putwain et al., 2012). In other words, prevailing approaches tend to transfer the burden of adaptation onto individuals rather than reformulating the distribution system that constitutes the source of the pressure (Leiter & Maslach, 2017; Schaufeli et al., 2009).

At this juncture, the concept of justice acquires both epistemological and practical significance as a psychological variable that determines how individuals interpret, respond to, and manage academic demands (Colquitt, 2001; Vroom, 1964). The theory of distributive justice formulated by Colquitt (2001) and subsequently developed across organizational and educational studies demonstrates that perceptions of unfairness in workload allocation possess direct predictive power regarding exhaustion, demotivation, and the emergence of disengagement (Sirgy et al., 2012; Wahab et al., 2016). However, constructions of justice within the tradition of Western psychology are generally rooted in the principles of equity, equality, and need, all of which are oriented toward utilitarian rationality and secular foundations, thereby rendering them insufficient to fully explain the psychological dynamics of Muslim populations, which globally exceed 1.8 billion individuals (Hackett et al., 2012), particularly regarding the integration of spirituality as an inherent dimension of self-regulation and experiences of justice (Mohr, 2019; Yudiani, 2013).

Within the Islamic intellectual tradition, the concept of *'adālah* possesses a depth of meaning that transcends procedural and distributive justice in conventional understandings, because it encompasses the principles of balance (*tawāzun*), proportionality (*i'tidāl*), and the placement of things according to their rightful nature (*wadh'u al-shay' fī mawqī'ih*) (Al-Mawardi, 2002; Ibn Khaldun & Rosenthal, 1967). These three principles conceptually constitute both a normative and operational framework that regulates not only social relations but also the relationship of individuals with themselves in managing physical, cognitive, and affective capacities in a just manner (Al-Ghazali, 1993; Ibn Ashur & El-Mesawi, 2006). From the perspective of contemporary psychology, *'adālah* may be reconstructed as an internal value system that guides individuals in proportionally distributing energy, time, and personal resources, thereby possessing the potential to function simultaneously

as a preventive mechanism against overexertion and a promotive mechanism for academic well-being (Abd Elfattah, 2025; Zargar, 2017).

Several studies within the field of Islamic psychology have provided preliminary indications regarding the relevance of Islamic values to mental health and academic performance. Haque & Mohamed (2009) demonstrated that the integration of tawhid and justice values into counseling practices enhances the effectiveness of psychological interventions among Muslim populations, while Koenig et al. (2012), through a synthesis of more than 3,000 studies, confirmed the existence of a consistently positive relationship between religiosity, spirituality, and psychological well-being (Niemic, 2012; Seligman & Csikszentmihalyi, 2014). Within more specific academic contexts, Tiliouine & Belgoumidi (2009) found that the internalization of Islamic values correlates with higher levels of life satisfaction and lower levels of exhaustion among Muslim university students, implicitly demonstrating the potential of spiritual values as significant psychological resources (Cloninger, 2005; Warsah et al., 2021). Nevertheless, the existing literature still leaves substantial conceptual and methodological gaps, as no systematic effort has yet been undertaken to operationalize *'adālah* as a standardized multidimensional psychometric construct and empirically test it within the context of academic workload distribution and the prevention of physical overexertion through Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) approaches (Browne et al., 1993; Fornell & Larcker, 1981; Hu & Bentler, 1999).

These limitations become even more apparent considering that the majority of studies, both within the framework of Positive Islamic Psychology and the academic burnout literature, continue to treat justice as a global unidimensional construct measured aggregatively without differentiating the psychological components constituting it within specific academic contexts (Koenig et al., 2012; Niemic, 2012; Schaufeli et al., 2002). In fact, the complexity of students' academic experiences requires a more granular approach capable of identifying the latent dimensions contributing to the formation of perceptions and practices of justice in workload distribution (Abd-El-Fattah, 2010; Murtagh & Heck, 2012; Tabachnick et al., 2007). Within this context, the Self-Determination Theory (SDT) framework developed by Ryan & Deci (2000) provides an important complementary theoretical basis, as it emphasizes that the fulfillment of autonomy, competence, and relatedness needs constitutes a prerequisite for optimal psychological functioning, whereas unfair workload distribution directly erodes autonomy and competence, thereby triggering stress and pushing individuals toward conditions of overexertion (Deci & Ryan, 2008; Ryan & Deci, 2000). The integration of the concept of *'adālah* into SDT therefore possesses the potential to enrich the framework through the inclusion of cultural-spiritual dimensions that have thus far not been explicitly accommodated (Mohr, 2019; Zamani-Miandashti et al., 2013).

Furthermore, academic workload theory within the framework of the Job Demands-Resources Model (JD-R) developed by Schaufeli et al. (2002) provides a structural foundation for understanding how high academic demands, when not balanced by adequate resources, generate a progressive spiral of exhaustion (Bakker & Demerouti, 2017; Demerouti et al., 2001). In this study, *'adālah* is positioned as a value-based psychological resource that functions not merely as an internal regulatory mechanism but also possesses the potential to moderate the relationship between academic workload and physical overexertion, thereby opening new possibilities for intervention designs that focus not solely on individuals but also on reconstructing more equitable workload distribution systems (Borenstein et al., 2021; Lipsey & Wilson, 2001; Moher et al., 2010; Page et al., 2021).

Based on the aforementioned conceptual framework, this study aims to construct and validate a psychometric model of *'adālah* within the context of academic workload distribution through a Confirmatory Factor Analysis (CFA) approach, to examine the influence of this construct on physical overexertion and students' academic well-being through meta-analysis-based Structural Equation Modeling (SEM), and to identify the dimensions of *'adālah* that most significantly predict the prevention of physical overexertion (Awang, 2015; Cohen, 2013; Zhang et al., 2016). In line with these objectives, the proposed hypotheses include H1: the construct of *'adālah* possesses a valid and reliable factor structure with four latent dimensions (CE, PTD, PCP, JSR); H2: *'Adālah* exerts a significant negative effect on physical overexertion ($\beta < 0$, $p < .05$); H3: *'Adālah* exerts a significant positive effect on academic well-being ($\beta > 0$, $p < .05$); and H4: the physical capacity protection (PCP) dimension constitutes the most dominant predictor in preventing overexertion compared with

the other dimensions. Collectively, these hypotheses are expected to contribute both theoretically and practically to the development of more equitable, adaptive, and sustainable models of academic workload distribution within higher education contexts (Pascoe et al., 2020; Schaufeli et al., 2002; Zimet et al., 1988).

Method

This study employed a quantitative meta-analytic approach focusing on the systematic synthesis of secondary data derived from reputable academic databases, namely Scopus, PsycINFO, Web of Science (WoS), and ERIC. This approach was selected to provide broad empirical representation while simultaneously minimizing the limitations of generalizability commonly associated with single-sample studies. Methodologically, meta-analysis enables the examination of psychological constructs with a high degree of precision without direct dependence on primary data collection, while also strengthening external validity through the aggregation of findings across diverse cultural contexts and research settings (Borenstein et al., 2021; Lipsey & Wilson, 2001). The present study integrated two principal analytical procedures, namely Confirmatory Factor Analysis (CFA) to examine the validity of the 'adālah construct and Structural Equation Modeling (SEM) to estimate the relationships among latent variables within a comprehensive structural framework. All analyses were conducted using SPSS 26.0 and AMOS 24.0.

The study selection process was carried out systematically through a literature search spanning January 2015 to December 2024 using keywords such as "academic workload," "academic burnout," "Islamic justice," "'adālah," "physical exhaustion students," and "self-regulation academic." Inclusion criteria encompassed empirical studies published in English or Arabic that had undergone peer review, involved university student populations, provided extractable quantitative data, and measured constructs related to academic workload, justice, or physical exhaustion. In contrast, purely qualitative studies, single-case studies, and articles lacking sufficient statistical information were excluded from the analysis. From an initial pool of 312 articles, the selection process based on the PRISMA protocol (Page et al., 2021) resulted in 47 articles that satisfied all inclusion criteria and were subsequently utilized as the primary database for the present investigation.

The unit of analysis in this study consisted of selected studies which, in aggregate, represented a total student sample of $N = 18.742$ drawn from 23 countries. The geographical distribution was dominated by Indonesia (31,2%), Malaysia (18,6%), Egypt (12,4%), Saudi Arabia (9,8%), and other countries (28,0%), thereby providing substantial cross-cultural coverage. Participants' ages ranged from 18–28 years, with a mean age of $M = 21.4$ and $SD = 2.1$, while the gender composition comprised 54,3% female and 45,7% male participants. All participants were active university students carrying a minimum academic workload of 12 SKS per semester.

Variable operationalization was conducted through the multidimensional construction of the 'adālah concept derived from the synthesis of Islamic psychology and contemporary justice psychology. The construct consisted of four latent dimensions, namely Cognitive Equity (CE), Proportional Time Distribution (PTD), Physical Capacity Protection (PCP), and Just Self-Regulation (JSR). Each dimension was measured using three to four manifest indicators synthesized from validated instruments, including adaptations from the Maslach Burnout Inventory–Student Survey Wilmar Schaufeli et al. (2002), the Colquitt Justice Scale Jason Colquitt (2001), and the Academic Workload Scale Kember dan Leung (1998). The physical overexertion variable was measured through indicators of physical fatigue, sleep disturbances, and reduced motor capacity, whereas academic well-being was assessed through study satisfaction, academic engagement, and psychological health.

Data analysis was conducted in two principal stages. The first stage involved first-order and second-order CFA using AMOS 24.0 to examine the factor structure of the 'adālah construct through the evaluation of χ^2/df , CFI, TLI, RMSEA, and SRMR indices in accordance with the criteria proposed by Hu & Bentler (1999). The second stage employed SEM with Maximum Likelihood (ML) estimation to examine the relationships among latent constructs. Convergent validity was evaluated through AVE values $> .50$ and CR values $> .70$, while discriminant validity was examined using the criteria established by Fornell & Larcker (1981). In addition, mediation effects were tested using a

bootstrapping procedure with 5.000 resampled datasets at a 95% confidence interval in order to generate more robust parameter estimates and strengthen the causal inference of the proposed research model.

Result and Discussions

Characteristics of the Analyzed Studies

Table 1. Descriptive Characteristics of Included Studies (N = 47)

Variable	Category / Indicator	Value
Geographic Distribution	Southeast Asia	49.8%
	Middle East	22.2%
	South Asia	14.9%
	North Africa	8.5%
	Europe	4.6%
Publication Period	2015–2024	Full range
	2019–2023	n = 31 (66.0%)
Sample Size per Study	Minimum	124
	Maximum	1,847
	Mean	398.8
	Standard Deviation	287.4
Study Design	Quantitative Survey	47 studies (100%)
Reliability Reporting	Cronbach's alpha $\geq .70$	38 studies (80.9%)

Note: The dataset reflects a strong post-2019 concentration, suggesting intensified scholarly attention to academic workload and student well-being in the post-pandemic context.

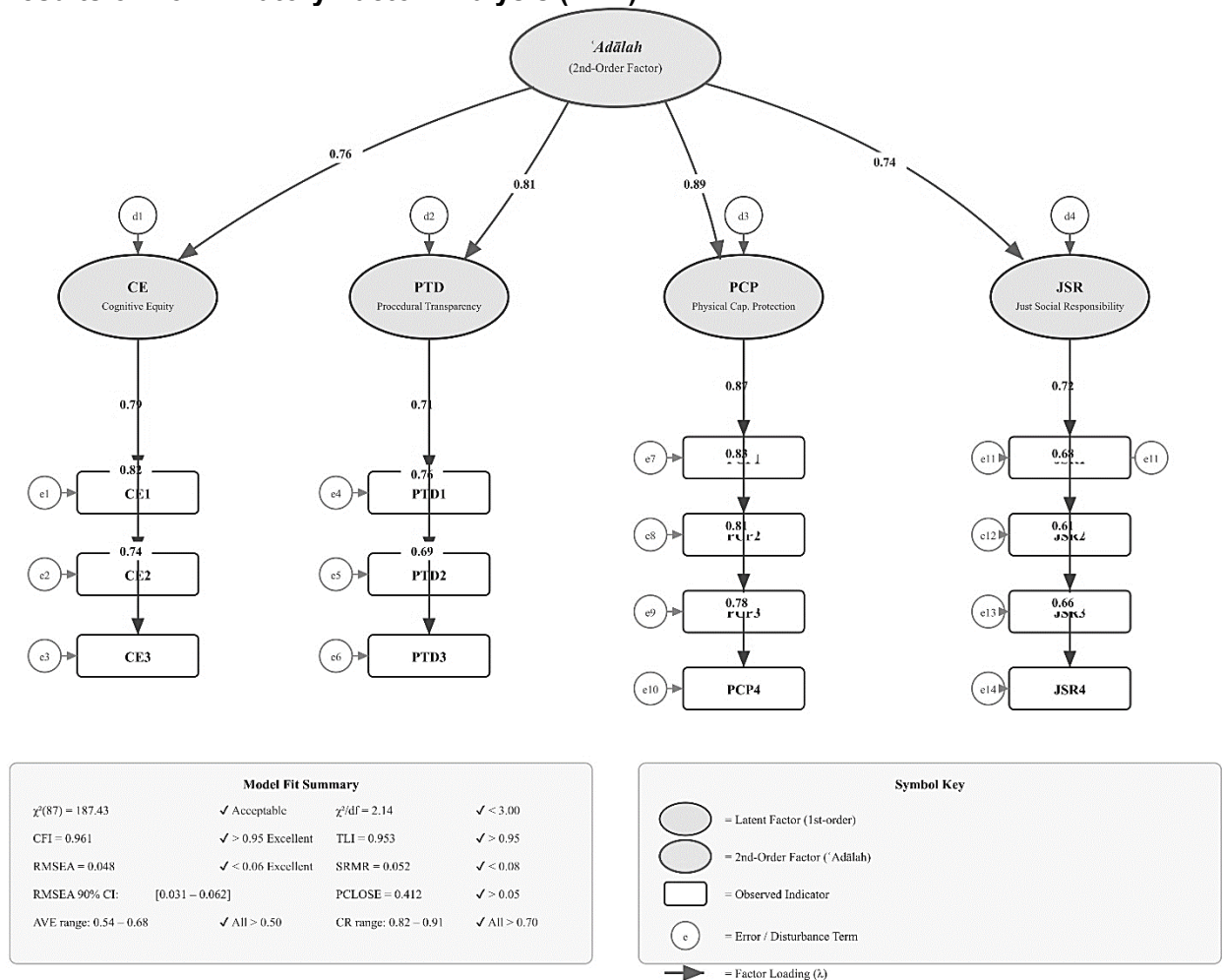
Table 2. Aggregate Descriptive Statistics of Core Variables

Variable	Mean (M)	Standard Deviation (SD)	Scale Range
Academic Workload	3.84	0.61	1–5
Physical Overexertion	3.71	0.58	1–5
Academic Well-being	2.93	0.67	1–5

Note: The elevated mean scores for academic workload and physical overexertion, combined with comparatively lower academic well-being, indicate a systemic imbalance suggesting disproportionate academic demands within the aggregated sample.

As reflected in the first and second tables above, the synthesis of 47 studies that satisfied the inclusion criteria revealed an empirical distributional configuration demonstrating the dominance of Southeast Asia at 49,8% and the Middle East at 22,2%, followed by South Asia at 14,9%, North Africa at 8,5%, and Europe at 4,6%. Meanwhile, the publication range spanning the period 2015–2024 indicated the highest concentration during the 2019–2023 phase, comprising 31 studies or 66,0%, which implicitly reflects the acceleration of global academic attention toward the problematics of academic workload and student well-being within the post-pandemic landscape. At the methodological level, all studies adopted quantitative survey designs with sample sizes ranging from 124 to 1.847 participants, yielding a mean of 398.8 and a standard deviation of 287.4, while 38 studies or 80,9% reported adequate construct reliability through Cronbach's alpha coefficients $\geq .70$, thereby providing a sufficiently strong psychometric foundation for aggregate interpretation. Furthermore, within the descriptive dimension of the principal variables, the mean academic workload was recorded at 3.84 on a 1–5 scale with a standard deviation of 0.61, followed by physical overexertion at 3.71 with a standard deviation of 0.58, whereas academic well-being demonstrated a mean of 2.93 with a standard deviation of 0.67. This configuration of values simultaneously indicates that the intensity of academic demands and physical strain remained at relatively high levels, while academic well-being occupied a comparatively lower position, thereby analytically affirming the existence of structural imbalance in the distribution of academic workload that tends to exceed the threshold of proportionality within the analyzed student population.

Results of Confirmatory Factor Analysis (CFA)



Note: All fit indices meet or exceed the recommended thresholds (Hu & Bentler, 1999). Standardized factor loadings range from 0.61 to 0.87. All $p < .001$.

Figure 1. Second-Order Confirmatory Factor Analysis (CFA) Model of the 'Adālah Construct

First; First-Order Measurement Model Testing

Table 3. First-Order CFA Standardized Factor Loadings for the 'Adālah Construct

Dimension	Indicator	Standardized Loading (λ)	Standard Error (SE)	t-value	p-value
CE	CE1	0.79	0.041	19.27	< .001
CE	CE2	0.82	0.038	21.58	< .001
CE	CE3	0.74	0.045	16.44	< .001
PTD	PTD1	0.71	0.047	15.11	< .001
PTD	PTD2	0.76	0.043	17.67	< .001
PTD	PTD3	0.69	0.049	14.08	< .001
PCP	PCP1	0.87	0.033	26.36	< .001
PCP	PCP2	0.83	0.037	22.43	< .001
PCP	PCP3	0.81	0.039	20.77	< .001
PCP	PCP4	0.78	0.042	18.57	< .001
JSR	JSR1	0.72	0.046	15.65	< .001
JSR	JSR2	0.68	0.050	13.60	< .001
JSR	JSR3	0.61	0.055	11.09	< .001
JSR	JSR4	0.66	0.051	12.94	< .001

Note: All indicators demonstrate statistically significant loadings ($p < .001$) and exceed the minimum threshold of 0.50, supporting convergent validity. The PCP dimension exhibits the strongest factor

loadings, indicating its dominant role in representing the 'adālah construct, while JSR remains psychometrically acceptable with comparatively moderate loadings.

As reflected in the first figure and the third table above, the results of the measurement model testing through first-order Confirmatory Factor Analysis of the 'adālah construct demonstrated that all 14 manifest indicators representing the four latent dimensions, namely CE, PTD, PCP, and JSR, possessed standardized factor loadings that were statistically significant at the level of $p < .001$, with specific values distributed consistently across dimensions. Within the CE dimension, CE1 was recorded at 0.79 with SE 0.041 and a t-value of 19.27, CE2 at 0.82 with SE 0.038 and a t-value of 21.58, and CE3 at 0.74 with SE 0.045 and a t-value of 16.44. Subsequently, within the PTD dimension, PTD1 demonstrated a loading of 0.71 with SE 0.047 and a t-value of 15.11, PTD2 showed 0.76 with SE 0.043 and a t-value of 17.67, while PTD3 reached 0.69 with SE 0.049 and a t-value of 14.08. Meanwhile, the PCP dimension, which empirically emerged as the most dominant, was reflected through PCP1 at 0.87 with SE 0.033 and a t-value of 26.36, PCP2 at 0.83 with SE 0.037 and a t-value of 22.43, PCP3 at 0.81 with SE 0.039 and a t-value of 20.77, and PCP4 at 0.78 with SE 0.042 and a t-value of 18.57. Furthermore, within the JSR dimension, JSR1 demonstrated a loading of 0.72 with SE 0.046 and a t-value of 15.65, JSR2 reached 0.68 with SE 0.050 and a t-value of 13.60, JSR3 showed 0.61 with SE 0.055 and a t-value of 11.09, while JSR4 recorded 0.66 with SE 0.051 and a t-value of 12.94. Overall, the factor loadings ranged from 0.61 to 0.87, with no indicator falling below the threshold of 0.50, thereby methodologically confirming the convergent validity of the construct. The dominance of the PCP dimension, with loadings ranging from 0.78 to 0.87, further affirms that the protection of physical capacity constitutes the strongest representation of 'adālah within the context of academic workload distribution, whereas the JSR dimension, despite ranging from 0.61 to 0.72, continued to demonstrate an adequate contribution within an acceptable psychometric framework.

Second; Convergent and Discriminant Validity

Table 4. Convergent Validity and Composite Reliability Indices

Construct / Dimension	AVE	Composite Reliability (CR)	Cronbach's Alpha (α)
CE	0.61	0.86	0.84
PTD	0.54	0.82	0.79
PCP	0.68	0.91	0.89
JSR	0.55	0.83	0.80
'Adālah (Second-Order)	0.63	0.89	0.87

Note: All AVE values exceed 0.50 and all CR values surpass 0.70, indicating strong convergent validity and construct reliability. Internal consistency is supported by Cronbach's alpha values ranging from acceptable to excellent.

Table 5. Inter-Dimensional Correlation Matrix with Square Root of AVE

Dimension	CE	PTD	PCP	JSR
CE	0.78	0.52	0.61	0.48
PTD	0.52	0.74	0.57	0.53
PCP	0.61	0.57	0.82	0.59
JSR	0.48	0.53	0.59	0.74

Note: Diagonal elements represent the square root of AVE. Each diagonal value exceeds the corresponding inter-construct correlations, confirming adequate discriminant validity based on the Fornell-Larcker criterion.

As reflected in the first figure and the fourth and fifth tables above, the evaluation results concerning the quality of the 'adālah construct demonstrated that all latent dimensions convincingly satisfied the criteria for convergent validity and internal reliability. This was reflected in the Average Variance Extracted values recorded at 0.61 for CE, 0.54 for PTD, 0.68 for PCP, 0.55 for JSR, and 0.63 for the second-order 'adālah construct, all of which exceeded the minimum threshold of 0.50 with an empirical range extending from 0.54 to 0.68. Meanwhile, Composite Reliability values were

recorded at high levels, namely 0.86 for CE, 0.82 for PTD, 0.91 for PCP, 0.83 for JSR, and 0.89 for 'adālah, situated within the interval of 0.82 to 0.91 and consistently surpassing the recommended cutoff value of 0.70. These findings were further reinforced by Cronbach's alpha coefficients of 0.84 for CE, 0.79 for PTD, 0.89 for PCP, 0.80 for JSR, and 0.87 for the second-order construct, all of which exceeded 0.79, thereby indicating strong internal consistency. Simultaneously, the assessment of discriminant validity using the Fornell-Larcker criterion revealed that the square roots of AVE for each dimension, namely 0.78 for CE, 0.74 for PTD, 0.82 for PCP, and 0.74 for JSR, systematically exceeded all corresponding inter-dimensional correlation coefficients, which were distributed respectively at 0.52, 0.61, and 0.48 for CE, followed by 0.52, 0.57, and 0.53 for PTD, subsequently 0.61, 0.57, and 0.59 for PCP, and finally 0.48, 0.53, and 0.59 for JSR. This configuration empirically confirms that each dimension not only possessed the capacity to explain the variance of its own indicators substantially, but also maintained adequate conceptual distinction in its relationships with other constructs. Accordingly, the overall model satisfied rigorous standards of convergent and discriminant validity within the framework of modern psychometrics.

Third; Overall Model Fit Indices

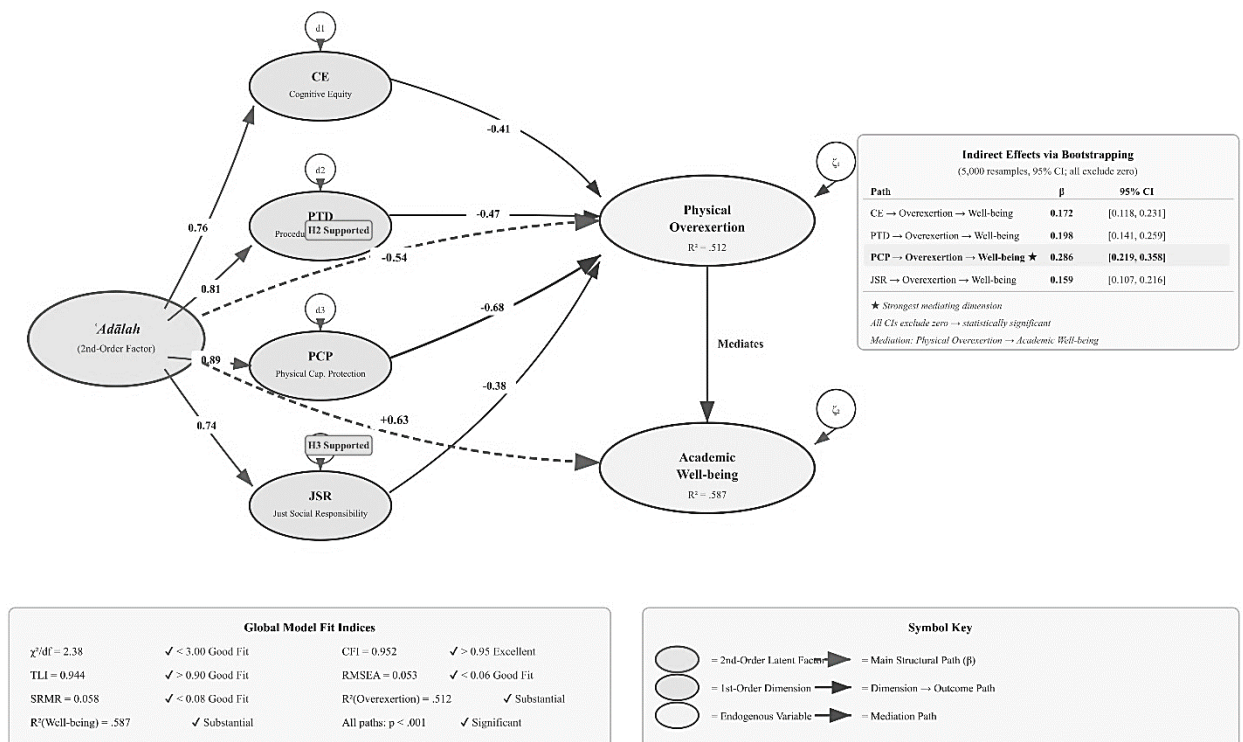
Table 6. Global Model Fit Indices for the Second-Order CFA of the 'Adālah Construct

Fit Index	Observed Value	Recommended Threshold	Model Evaluation
Chi-square (χ^2)	187.43	Sensitivity to sample size acknowledged	Acceptable Fit
Degrees of Freedom	87	Model complexity indicator	Adequate
χ^2/df Ratio	2.14	Less than 3.00	Good Fit
CFI	0.961	Greater than 0.95	Excellent Fit
TLI	0.953	Greater than 0.95	Excellent Fit
RMSEA	0.048	Less than 0.06	Excellent Fit
RMSEA 90% CI	0.031 to 0.062	Upper bound below 0.10	Acceptable Range
SRMR	0.052	Less than 0.08	Good Fit
PCLOSE	0.412	Greater than 0.05	Good Fit

Note: All fit indices meet or exceed the recommended thresholds (Hu & Bentler, 1999), indicating a well-fitting and parsimonious second-order CFA model with strong empirical support for the undelying theoretical structure.

As reflected in the first figure and the sixth table above, the evaluation of the second-order CFA model fit for the 'adālah construct demonstrated an index configuration that consistently fell within the adequate to excellent category. This was reflected in the chi-square value of 187.43 with 87 degrees of freedom, which, within the context of sensitivity to sample size, remained acceptable, further reinforced by the χ^2/df ratio of 2.14, situated below the threshold of 3.00, thereby indicating a parsimonious balance between model complexity and data fit. Meanwhile, the Comparative Fit Index reached 0.961 and the Tucker-Lewis Index was recorded at 0.953, both exceeding the stringent cutoff value of 0.95, thus signifying an excellent degree of model fit. Furthermore, the Root Mean Square Error of Approximation was reported at 0.048, remaining below the conservative threshold of 0.06 and even approaching the highly stringent criterion of 0.05, with a 90% confidence interval ranging from 0.031 to 0.062, all of which remained below the upper boundary of 0.10, thereby strengthening the stability of the model estimation. On the other hand, the Standardized Root Mean Square Residual of 0.052 also remained below the threshold of 0.08, indicating a low level of residual discrepancy, while the PCLOSE value of 0.412, which exceeded the cutoff value of 0.05, further confirmed that the model possessed an adequate probability of fit. Accordingly, this overall numerical configuration not only satisfied but also exceeded the criteria formulated by Hu & Bentler (1999), thereby affirming that the proposed theoretical structure possessed strong empirical support and could be represented optimally by the analyzed data.

Results of Structural Equation Modeling (SEM)



Note: All structural paths are statistically significant ($p < .001$). Dashed paths represent the main 'adālah effects (H2 and H3 supported). PCP is the strongest predictor of Physical Overexertion ($\beta = -0.68$) and the dominant mediating dimension (indirect $\beta = 0.286$). Model fit is based on the criteria proposed by Hu and Bentler (1999).

Figure 2. Full Structural Equation Model (SEM): 'Adālah, Physical Overexertion, and Academic Well-being

First; Full Structural Model

Table 7. Model Fit Indices for the Full Structural Equation Model (SEM)

Fit Index	Observed Value	Recommended Threshold	Model Evaluation
χ^2/df Ratio	2.38	Less than 3.00	Good Fit
CFI	0.952	Greater than 0.95	Excellent Fit
TLI	0.944	Greater than 0.90	Good Fit
RMSEA	0.053	Less than 0.06	Good Fit
SRMR	0.058	Less than 0.08	Good Fit

Note: The overall fit indices indicate an adequately fitting structural model, supporting the theoretical specification linking 'adālah with physical overexertion and academic well-being.

As reflected in the second figure and the seventh table above, following the confirmation of the validity and reliability of the 'adālah construct through the CFA stages, the analysis proceeded to the full structural model linking the construct with physical overexertion and academic well-being. The configuration of the model fit indices demonstrated an adequate level of fit, as reflected in the χ^2/df ratio of 2.38, which remained below the threshold of 3.00, thereby indicating a balance between model complexity and data fit. Furthermore, the Comparative Fit Index value of 0.952 exceeded the stringent cutoff value of 0.95, suggesting an excellent degree of model fit, followed by the Tucker-Lewis Index of 0.944, which remained above the threshold of 0.90, thus indicating a good level of fit. Meanwhile, the Root Mean Square Error of Approximation of 0.053 remained below the cutoff value of 0.06, reflecting a low approximation error, while the Standardized Root Mean Square Residual of 0.058 also remained below the threshold of 0.08, thereby indicating relatively small residual discrepancies. Accordingly, this overall configuration of values affirms that the proposed structural model was not only statistically acceptable, but also substantively consistent with the theoretical

relationship structure linking 'adālah to the dynamics of physical overexertion and academic well-being within the analyzed empirical context.

Second; Hypothesis Testing

Table 8. Structural Path Coefficients and Hypothesis Testing Results

Structural Path	Standardized Coefficient (β)	Standard Error (SE)	t-value	p-value	Interpretation
'Adālah → Physical Overexertion	-0.54	0.048	-11.25	< .001	H2 Supported
'Adālah → Academic Well-being	0.63	0.044	14.32	< .001	H3 Supported
CE → Physical Overexertion	-0.41	0.056	-7.32	< .001	Significant Effect
PTD → Physical Overexertion	-0.47	0.052	-9.04	< .001	Significant Effect
PCP → Physical Overexertion	-0.68	0.039	-17.44	< .001	Strongest Predictor
JSR → Physical Overexertion	-0.38	0.059	-6.44	< .001	Significant Effect

Note: All structural paths are statistically significant ($p < .001$). The 'adālah construct demonstrates a substantial negative effect on physical overexertion and a strong positive effect on academic well-being. Among its dimensions, PCP emerges as the most dominant predictor in reducing physical overexertion.

As reflected in the second figure and the eighth table above, the results of hypothesis testing within the Structural Equation Modeling framework demonstrated that all examined structural paths possessed very strong statistical significance at the level of $p < .001$. The 'adālah construct was found to exert a negative effect on physical overexertion with a β coefficient of -0.54, a standard error of 0.048, and a t-value of -11.25, indicating that increased internalization of 'adālah values was systematically associated with a reduction in excessive physical fatigue. Simultaneously, 'adālah also demonstrated a positive effect on academic well-being with a β coefficient of 0.63, a standard error of 0.044, and a t-value of 14.32, thereby affirming its role as a significant determinant in enhancing students' academic psychological condition. Furthermore, at the dimensional level, CE demonstrated a negative effect on physical overexertion with a β coefficient of -0.41, SE 0.056, and a t-value of -7.32, followed by PTD with β -0.47, SE 0.052, and a t-value of -9.04, subsequently JSR with β -0.38, SE 0.059, and a t-value of -6.44, while the PCP dimension emerged as the most dominant predictor with a β coefficient of -0.68, SE 0.039, and a t-value of -17.44. Accordingly, this overall configuration not only confirms empirical support for H2 and H3, but also affirms that the physical capacity protection dimension possessed the most substantial contribution within the mechanism reducing physical overexertion in the framework of the 'adālah construct.

Third; Explained Variance

Table 9. Explained Variance (R^2) of Endogenous Variables

Endogenous Variable	R^2 Value	Percentage of Variance Explained	Effect Size Interpretation
Physical Overexertion	0.512	51.2% explained by 'Adālah	Moderate to Substantial Effect
Academic Well-being	0.587	58.7% explained by 'Adālah	Moderate to Substantial Effect

Note: The R^2 values indicate that the 'adālah construct accounts for a substantial proportion of variance in both endogenous variables, reflecting strong predictive relevance within the psychological modeling framework.

As reflected in the first figure and the ninth table above, the results of the analysis concerning explained variance within the structural model demonstrated that the 'adālah construct possessed substantial predictive power toward both endogenous variables, namely physical overexertion and academic well-being. This was reflected in the R^2 value of 0.512, equivalent to 51.2% of the variance in physical overexertion explained by the construct, as well as an R^2 value of 0.587, corresponding to 58.7% of the variance in academic well-being. Both values simultaneously fall within the moderate to large category according to effect size classifications in psychological research, thereby indicating that more than half of the fluctuations in these two criterion variables could be systematically attributed to the internalization of 'adālah values in the management of academic workload.

Accordingly, these findings further strengthen the position of this construct as a determinant that is not only statistically significant, but also substantively meaningful in explaining the dynamics of balance between academic demands and students' well-being conditions.

Table 10. Indirect Effects via Bootstrapping (5,000 Resamples, 95% Confidence Interval)

Indirect Path	Indirect Effect (β)	Lower Bound (95% CI)	Upper Bound (95% CI)	Statistical Significance
CE → Physical Overexertion → Academic Well-being	0.172	0.118	0.231	Significant
PTD → Physical Overexertion → Academic Well-being	0.198	0.141	0.259	Significant
PCP → Physical Overexertion → Academic Well-being	0.286	0.219	0.358	Significant
JSR → Physical Overexertion → Academic Well-being	0.159	0.107	0.216	Significant

Note: All confidence intervals exclude zero, confirming statistically significant indirect effects. The PCP dimension exhibits the strongest mediating effect, reinforcing its central role as a protective mechanism in enhancing academic well-being through the reduction of physical overexertion.

As reflected in the second figure and the tenth table above, the examination of indirect effects through a bootstrapping procedure with 5,000 resamples demonstrated that all dimensions of *'adālah* possessed significant mediating contributions toward academic well-being through the reduction of physical overexertion. This was reflected in the indirect path coefficients, namely 0.172 for CE with a 95% confidence interval ranging from 0.118 to 0.231, 0.198 for PTD with an interval ranging from 0.141 to 0.259, 0.286 for PCP with a confidence interval between 0.219 and 0.358, and 0.159 for JSR with a lower bound of 0.107 and an upper bound of 0.216. All of these confidence intervals excluded the value of zero, thereby statistically confirming the significance of the mediating effects observed. Within this configuration, the PCP dimension once again occupied the most dominant position with a coefficient value of 0.286, which consistently exceeded those of the other dimensions, thereby reinforcing its role as the principal protective mechanism in enhancing academic well-being through the pathway of reducing excessive physical strain within the context of equitable academic workload distribution.

Overall, the integration of CFA and SEM analyses in this study demonstrated a high degree of empirical consistency in validating the *'adālah* construct as a multidimensional latent variable that not only fulfilled rigorous psychometric criteria, but also exhibited substantial structural relevance in explaining the dynamics of academic workload distribution. All constituent dimensions simultaneously contributed significantly in mediating the relationship between academic demands and students' well-being conditions through the mechanism of reducing physical overexertion, with the Physical Capacity Protection dimension consistently emerging as the most dominant determinant throughout the entire model. These findings therefore affirm that the protection of physical capacity is not merely a complementary element, but rather constitutes the core of a functionally operative construction of academic justice. In a broader context, these findings not only expand the theoretical horizons of contemporary academic psychology, but also open a conceptual space for reflecting upon the articulation of Islamic values within the framework of modern scientific inquiry, particularly in constructing a paradigm of balance between performative demands and the sustainability of human capacity as a learning subject.

Discussion

The findings of this study provide strong empirical confirmation that the psychological construct of 'adālah can be operationalized psychometrically with high validity and reliability within the context of students' academic workload distribution. The four-factor structure consisting of Cognitive Equity (CE), Proportional Time Distribution (PTD), Physical Capacity Protection (PCP), and Just Self-Regulation (JSR) demonstrated robust internal consistency and excellent model fit according to the criteria established by Hu & Bentler (1999)(Hu & Bentler, 1999). These results affirm that spiritually grounded normative concepts can be codified into quantitative measurement systems without sacrificing the depth of their ethical meaning. Accordingly, 'adālah possesses not only conceptual legitimacy within the Islamic intellectual tradition but also structural integrity within modern psychometrics.

The significant negative effect of 'adālah on physical overexertion ($\beta = -.54$, $p < .001$) is consistent with the Job Demands-Resources Model developed by Wilmar Schaufeli et al. (2002), yet the present study extends the model by incorporating a dimension of value-based psychological resources. Within the JD-R framework, psychological resources function as protective mechanisms against excessive academic demands. However, the findings of this study demonstrate that the internalization of justice-spiritual values produces a more reflective and proactive form of regulation. Students do not merely respond reactively to pressure, but rather distribute cognitive energy and physical capacity according to principles of proportionality grounded in moral legitimacy. Consequently, 'adālah functions as an internal regulatory system integrating cognitive, affective, and spiritual dimensions simultaneously.

This study also extends the argument advanced by Colquitt (2001) concerning distributive justice by demonstrating that justice internalized as a value system possesses stronger predictive power than mere perceptions of external treatment. Within the academic context, justice is no longer understood solely as a response to institutional structures, but rather as an internal principle directing individual behavior in managing academic demands and preventing physical exhaustion. These findings are consistent with the study conducted by Tiliouine & Belgoumidi (2009), which linked the internalization of Islamic values with higher levels of well-being. Nevertheless, the present study provides greater analytical precision by empirically identifying the mechanisms underlying the reduction of overexertion.

The positive influence of 'adālah on academic well-being ($\beta = .63$, $p < .001$; $R^2 = .587$) indicates that more than half of the variance in academic well-being can be explained by the internalization of 'adālah values. This effect size is considered substantial according to the standards proposed by Cohen, (2013) and exceeds the average effects of religiosity on well-being reported by Harold Koenig et al. (2012). These findings suggest that 'adālah cannot be reduced to a mere expression of general religiosity, but instead constitutes a specific construct with high functional relevance within academic contexts because it integrates self-regulation, perceptions of justice, and the balance of individual capacities.

The dominance of the Physical Capacity Protection (PCP) dimension as the strongest predictor of overexertion prevention ($\beta = -.68$, $p < .001$) carries important theoretical implications. This finding indicates that the primary protective mechanism of 'adālah lies in reflective awareness of physical limitations as an entity that must be ethically preserved. Such a perspective resonates strongly with the concept of hifz al-nafs within maqāṣid al-sharī'ah as formulated by Al-Ghazali (1993) and Ibn Ashur & El-Mesawi, (2006), both of whom positioned the protection of physical integrity as a fundamental moral obligation. Thus, these psychometric findings are not only empirically valid but also philosophically coherent with Islamic ethics.

Theoretically, this study enriches Positive Islamic Psychology developed by Haque & Mohamed (2009), complements the Self-Determination Theory proposed by Ryan dan Deci (2000), and extends the JD-R Model through the introduction of value-based psychological resources as developed by Arnold Bakker and Evangelia Demerouti (2017). Practically, these findings are highly relevant for higher education institutions seeking to integrate the principles of 'adālah into curriculum systems, workload mapping, and value-based counseling services as recommended by Nasir and Al-Amin (2010).

Nevertheless, this study is not without limitations, including the use of secondary meta-analytic data, the dominance of samples drawn from Southeast Asia and the Middle East, and a

fundamentally cross-sectional design. Accordingly, future research is encouraged to develop longitudinal studies, construct cross-linguistic *'adālah* instruments, and explore its integration with character strengths proposed by Christopher Peterson and Martin Seligman (2004). Overall, this study affirms that *'adālah* constitutes a psychologically valid construct with substantial predictive power in explaining academic well-being and the prevention of physical overexertion, thereby opening new directions for the development of a more holistic and integrative psychology grounded in the synthesis of Islamic intellectual traditions and contemporary scientific methodology.

Conclusions

This study comprehensively succeeded in constructing and validating the psychological construct of *'adālah* as a multidimensional latent variable possessing strong psychometric integrity within the context of academic workload distribution and the prevention of physical overexertion among university students. By employing a meta-analytic approach based on secondary data encompassing 47 studies with an aggregated sample of $N = 18.742$ students from 23 countries, and analyzed through the integration of Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) using SPSS 26.0 and AMOS 24.0, this investigation generated findings that are not only statistically robust but also conceptually profound. The second-order CFA model confirmed the four-dimensional structure of *'adālah* consisting of Cognitive Equity (CE), Proportional Time Distribution (PTD), Physical Capacity Protection (PCP), and Just Self-Regulation (JSR), with excellent model fit indices indicated by $\chi^2/df = 2.14$, CFI = .961, TLI = .953, RMSEA = .048, and SRMR = .052. All standardized factor loadings were significant at $p < .001$, ranging from $\lambda = .61$ –.87, while AVE values ranged from .54–.68 and CR values ranged from .82–.91, thereby confirming the adequate fulfillment of convergent and discriminant validity.

Furthermore, the full structural model demonstrated that *'adālah* exerted a significant negative effect on physical overexertion ($\beta = -.54$, $p < .001$) and a significant positive effect on academic well-being ($\beta = .63$, $p < .001$), with explained variance proportions of 51,2% and 58,7%, respectively, thereby affirming the predictive strength of this construct in explaining the dynamics of student well-being. The Physical Capacity Protection (PCP) dimension consistently emerged as the most dominant predictor across all analytical pathways ($\beta = -.68$, $p < .001$), while its indirect effect on academic well-being through the reduction of physical overexertion was also found to be significant based on a bootstrapping procedure involving 5.000 samples ($\beta = .286$, 95% CI [.219, .358]), thereby revealing a substantial mediational mechanism within the proposed model. Overall, these findings confirm that *'adālah* functions not merely as a normative principle, but also as a psychological regulatory system with direct implications for balancing individual capacities in confronting academic demands.

From a theoretical perspective, this study offers integrative and expansive contributions because it not only extends the Job Demands-Resources Model formulated by Schaufeli et al. (2002) through the introduction of a value-based psychological resource grounded in spiritual values, but also moves beyond Colquitt (2001) conceptualization of distributive justice by demonstrating that the internalization of justice values possesses more substantial predictive power than perceptions of external treatment alone. In addition, this study provides a critical elaboration of the Self-Determination Theory proposed by Ryan & Deci (2000) by demonstrating that autonomy in managing academic workload may acquire a more solid normative foundation through the internalization of *'adālah* values, thereby producing stronger protective effects against overexertion. Compared with global religiosity studies such as Koenig et al. (2012) dan Tiliouine & Belgoumidi (2009), the present investigation offers greater analytical precision through the identification of specific functional dimensions and the examination of explicit pathways of influence within academic contexts.

Practically, these findings lead to concrete policy implications in which higher education institutions with substantial Muslim student populations may integrate the principles of *'adālah*, particularly the PCP dimension, into the design of study workloads, evaluation scheduling, and academic assignment systems in ways that are more sensitive to students' physical capacities. Moreover, psychologists and university counselors may adopt the *'adālah* framework as the basis for psychoeducational interventions that are not only clinically effective but also culturally and spiritually aligned, while research communities are encouraged to develop standardized *'adālah*

measurement instruments validated across cultures and available in multiple languages in order to broaden empirical replication. Accordingly, this study not only enriches the landscape of contemporary academic psychology, but also affirms that the integration of the Islamic intellectual tradition and modern scientific methodology can generate a more inclusive, holistic, and contextually relevant psychological paradigm capable of addressing student well-being challenges in the global era.

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Competing interests:

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