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ACADEMIC STRESS, COPING STRATEGIES AND ACADEMIC MOTIVATION AMONG UNIVERSITY STUDENTS IN FAISALABAD, PAKISTAN: A STRUCTURAL EQUATION MODELING APPROACH

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ABSTRACT

Academic stress and its effects on student motivation are key issues in higher education worldwide, but there is limited evidence on this topic, especially in South Asian settings in Pakistan. This research used the direct and indirect relationships as defined by the Transactional Model of Stress and Coping (Lazarus and Folkman, 1984) and the Self-Determination Theory (Deci and Ryan, 1985, 2000) to determine the relationship between academic stress, three coping styles (problem-focused, emotion-focused, and avoidant), and academic motivation among Pakistani students. Quantitative, cross-sectional survey design was adopted, and a stratified random sample of 500 undergraduate and postgraduate students was selected in Faisalabad: Government College University Faisalabad (GCUF), University of Agriculture Faisalabad (UAF), National Textile University (NTU), The University of Faisalabad (TUF), and Riphah University Faisalabad. Perceived Stress Scale (PSS-10, Cohen et al., 1983) was used to determine academic stress, Brief COPE Inventory (Carver, 1997) to measure coping and Academic Motivation Scale (AMS; Vallerand et al., 1992) to measure motivation. Pearson correlation, multiple linear regression and Structural Equation Modeling (SEM) with bootstrapped mediation were done. Findings indicated that academic stress had an insignificant direct influence on motivation (β = .007, p = .941). Only avoidant coping was significantly (β = .088, p = .050) and negatively predictive (all indirect effects $p > .80$). SEM mediation analyses indicated that none of the three coping strategies significantly mediated the stress–motivation relationship (all indirect effects $p > .80$). The total model only accounted 1.1 per cent of the variance in motivation (R^2 =.011) implying that institutional, social and contextual variables have a significant overriding effect on individual coping in motivational outcome determination. Those results call into question the existing theoretical presumption that student motivation is solely driven by stress management and highlight the importance of institutional-wide interventions, such as academic counseling, mentorship programs, and autonomy-supportive pedagogical practices to maintain motivation in high-stress, resource-limited institutions of higher learning.

Keywords: *academic stress, coping strategies, academic motivation, self-determination theory, structural equation modeling, Pakistani universities, higher education*

1.INTRODUCTION

Academic stress, manifested by challenging coursework, financial insecurity, family pressures, and competitive academic conditions, is a constellation of stresses faced by university students worldwide and can lead to the deterioration of learning motivation (Folkman and Lazarus, 1985; Pascoe et al., 2020). In Pakistani higher education, these stressors are exacerbated by contextually sensitive stressors: the inflexibility of summative grading frameworks, the under-investment of student support services, and widespread socio-cultural pressures to perform academically, as a measure of family honour (Hussain, 2020; Kausar, 2010). Recognizing the reactions of Pakistani university students to these pressures, how their coping repertoires mediate motivational consequences, is thus both theoretically important and practically pressing.

Stress has been widely conceptualized as the perceived discrepancy between the environmental demands and the perceived ability of an individual to deal with them (Lazarus and Folkman, 1984). In the educational context, stressors like the pressure to study in examinations, assignment deadlines, and competitive grading can have diverse motivational effects: moderate stress can be mobilizing, whereas chronic, unregulated stress is linked to lower intrinsic motivation, emotional fatigue, and lack of interest in academics (Schaufeli et al., 2002; APA, 2021). Theoretically, the coping style of students (cognitively and behaviorally) in response to stress acts as a key moderating or mediating variable between stressor exposure and motivational outcomes (Carver et al., 1989; Compas et al., 2001).

A comprehensive theory of interest in explaining this process is the Self-Determination Theory (SDT; Deci and Ryan, 1985, 2000). SDT is based on the hypothesis that optimal motivation, as autonomous regulation and intrinsic interest, depends on the fulfillment of the basic psychological needs of autonomy, competence and relatedness. Chronic stress, especially when perceived as threatening, as opposed to an opportunity to deal with it as a challenge, most probably will exasperate these needs and change motivational regulation towards more controlled forms as opposed to autonomous ones or will trigger amotivation altogether. This motivational erosion can be buffered by adaptive coping strategies (including systematic problem-solving) which can re-establish a sense of competence and control; it is postulated that it may be aggravated by maladaptive coping strategies (including avoidance and disengagement).

Although this theoretical framework is in some ways coherent, the existing body of empirical evidence that connects stress, coping, and motivation is mostly Western-based (Compas et al., 2001; Santiago and Wadsworth, 2009), and has little relevance to South Asian settings which are characterised by different cultural norms, family-based motivation frameworks, and limited institutional support (Kausar, 2 The current research fills this gap by using Structural Equation Modeling (SEM) to examine the direct and indirect (mediated by coping) impacts of academic stress on academic motivation in students pursuing studies in five universities in Faisalabad, Pakistan.

1.1 Research Objectives and Questions

The research process had three related aims: (a) the description of the levels of academic stress, coping strategies use, and academic motivation in the sample population; (b) the evaluation of direct relationships between stress, coping strategies, and motivation; and (c) the examination of whether the coping strategies mediate between academic stress and academic motivation.

The following research questions were used to operationalize these objectives:

RQ1: What is the association between academic stress and academic motivation among Pakistani university students?

RQ2: Which coping strategies (problem-focused, emotion-focused, avoidant) predict academic motivation, and in what direction?

RQ3: Do coping strategies mediate the relationship between academic stress and academic motivation?

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Theoretical Foundations

This research has three complementary frameworks as its theoretical underpinning.

First, the conceptualization of stress as a relational interaction of a person with the environment mediated by cognitive appraisal in the Transactional Model of Stress and Coping by Lazarus and Folkman (1984) presents the stress in the environment as an objective stimulus. The model differentiates between primary (assessment of the relevance of stressor) and secondary appraisal (assessment of coping resources available), and hypothesizes that coping responses (problem-focused (to adjust the source of stress), emotion-focused (to adjust the emotional response)) moderate the effects of stressor exposure. In learning environments, students who perceive exams as problems that can be tackled through strategic effort are more inclined to maintain problem-oriented coping and continue to be motivated, whereas students who perceive them as threats that they cannot control adopt avoidant coping and fail to maintain motivation.

Second, these coping consequences can be explained based on the Self-Determination Theory (Deci and Ryan, 1985, 2000). SDT identifies three types of academic motivation: intrinsic motivation (engagement due to intrinsic interest), extrinsic motivation (engagement due to external contingencies like grades and social approval), and amotivation (lack of regulatory intent). This theory is based on the fact that the level of autonomy, competence and relatedness satisfaction a person has with the learning environment, is what dictates the quality of motivation regulation. It is hypothesized that chronic academic stress, especially the one in systems that are characterized by high-stakes assessment and low learner autonomy, will erode intrinsic motivation and promote controlled extrinsic regulation or amotivation (Ryan and Deci, 2017).

Third, the Conservation of Resources (COR) Theory by Hobfoll (2002) brings in a resource-depletion angle: people have an incentive to gain, hold, and safeguard valuable resources (energy, time, social support, self-efficacy). Academic stress consumes these resources and when consumption exceeds renewal, there will be a loss of motivation. Adaptive coping is a resource conserving or restoring scheme, and avoidant coping (by postponing problem solving) hastens the process of resource depletion. COR theory therefore offers a process by which progressively eroding motivational numbness is the result of chronic avoidance.

2.2 Academic Stress and Student Motivation

Academic stress and motivation have a nonlinear relationship. The Yerkes-Dodson model of inverted-U predicts that moderate arousal is optimal performance, and a distinction between eustress (growth-promoting) and distress (debilitating) suggested by Selye (1976) is that cognitive depletion and withdrawal are associated with overwhelming demands. This subtlety is empirically supported: in a systematic review and meta-analysis, Pascoe and colleagues (2020) have indicated that the negative effects of chronic stress on academic performance outcomes are moderate-weak, but are significantly mediated by the context. The findings of Schaufeli and colleagues (2002) were stronger negative correlations between stress and engagement in high-control and autonomy-thwarting conditions, which is a characteristic of many Pakistani universities.

In Pakistan, Hussain (2020) recorded that students of universities indicated that they experienced high levels of stress due to family performance expectation and the lack of psychological support infrastructure. Kausar (2010) discovered that two major stress drivers were perceived academic workload and lack of institutional direction. Importantly, these studies provide indications that in cultures where academic success is tightly linked to family cohesion and social status, the motivational effects of stress can be tempered with external obligation, which may soften the anticipated negative stress-motivation interaction at the expense of independent interaction.

2.3 Coping Strategies and Their Motivational Consequences

The original dichotomies of coping proposed by Lazarus and Folkman (1984) were problem-focused and emotion-focused coping; avoidant coping, a distinct, mostly maladaptive category, was added to subsequent taxonomies (Carver et al., 1989; Zimmer-Gembeck and Skinner, 2011). Problem-oriented coping, which includes active planning, help-seeking, and restructuring tasks is always related to increased academic engagement and persistence (Compas et al.,

2001). Emotion-oriented coping-reappraisal, emotional processing and social sharing-demonstrates less consistent relationships to academic outcomes and positive reappraisal subcomponents are linked with continued motivation and rumination subcomponents with disengagement (Santiago and Wadsworth, 2009). Procrastination, denial, and behavioural disengagement (avoidant coping) have a strong association with a reduction in motivation, academic self-efficacy, and increased dropout intentions (Malik and Rehman, 2019).

The same tendencies are supported by Pakistani data: Khan and colleagues (2021) discovered that problem-oriented coping had a positive predictive impact on academic motivation and academic resilience, and the strongest predictability of motivational loss was attributed to avoidant coping. The stress-motivation negative correlation was buffered by proactive planning strategies as compared to avoidance coping which aggravated the relationship (Malik and Rehman, 2019). Kausar (2010) has observed that spiritual and religious coping, as practiced by Pakistani students, were most likely to offer a short-term emotional benefit, but were not consistently linked to long-term academic motivation.

2.4 Gaps in the Literature and Study Rationale

although there are converging stories in western and constrained pakistani contexts, there are four significant gaps that should be addressed. to begin with, the majority of pakistani researches have been based on straightforward bivariate analysis or the general least squares regression, which does not allow simultaneous estimation of direct and indirect pathways; sem has a better ability to test a complex mediation model by considering measurement error (kline, 2015). second, validated, internationally standardized instruments have been infrequently used together (pss-10, brief cope, ams) which reduces cross-study comparability. third, the institutional context has not been systematically tackled, including in the form of multi-university sampling. fourth, the five major universities of faisalabad have not been recruited in the same time in any of the reviewed studies, which restricts generalizability in the principal educational centre. all four gaps are filled in the current research.

3. METHODOLOGY

3.1 Research Design

The design adopted was a quantitative, cross-sectional, correlational design. Such a design was suitable considering the goal of the study to analyze associative relationships and test an a priori mediation model at one time point (Creswell and Creswell, 2018). The analytical plan included descriptive statistics, Pearson product-moment correlation, multiple linear regression and Structural Equation Modeling (SEM) with bootstrapped mediation estimation.

3.2 Sampling and Participants

The sampled population was all enrolled undergraduates and postgraduates students of five Faisalabad universities in Pakistan: Government College University Faisalabad (GCUF), University of Agriculture Faisalabad (UAF), National Textile University (NTU), The University of Faisalabad (TUF), and Riphah University Faisalabad (RUF). The sampling was stratified whereby each university formed a stratum and 100 students were randomly chosen in each stratum through the use of random numbers produced based on the institutional enrolment lists. The proportionate representation was further stratified in terms of programme level (undergraduate/postgraduate) and gender. The sample size was N = 500.

The adequacy of the sample size was assessed with reference to two criteria: the power analytic guidelines of Cohen (1988) (including the N = 200 to detect the small-to-medium effects in regression at the 0.05 level with the power =.80) and the SEM rule of ten or more cases per estimated parameter (Kline, 2015). A sample of 500 significantly surpassed both limits.

3.3 Measures

3.3.1 Academic Stress

The level of academic stress was measured using Perceived Stress Scale-10-item version (PSS-10; Cohen et al., 1983). The respondents were asked to evaluate 10 questions in a 5-point scale (0 = never, 4 = very often) contributing to a composite score of the 0-40 (rescaled here to 0-100 to compare across variables). The PSS-10 has strong psychometric qualities in a variety of population samples and has been tested on Pakistani student samples (Kausar, 2010). The

internal consistency of the current sample was α =.87.

3.3.2 Coping Strategies

The scale of coping was the Brief COPE Inventory (Carver, 1997), a 28-item measure that measures 14 coping subscales (2 items per) on a 4-point scale of frequency. Items were pooled into three higher-order composites which followed established precedent (Compas et al., 2001): problem-focused coping (active coping, planning, positive reframing, acceptance), emotion-focused coping (use of emotional support, venting, humour), and avoidant coping (self-distraction, denial, substance use, behavioural disengagement, self-blame). Problem-focused (problem-focused 78), emotion-focused (emotion-focused 73) and avoidant coping (avoidant coping 76) had satisfactory internal consistency.

3.3.3 Academic Motivation

The Academic Motivation Scale (AMS; Vallerand et al., 1992) measured academic motivation, with 28 items based on SDT that provide subscale scores of intrinsic (knowledge, accomplishment, stimulation), extrinsic (identified, introjected, external regulation) and amotivation. Primary analyses were carried out on a composite global motivation score, with internal consistency α = .88.

3.4 Procedure

The questionnaires were conducted through Google Forms, and they were distributed through the official university student portals, and Whatsapp study groups with the institutional approval. The data were collected in six weeks. The anonymity and voluntary participation were guaranteed; informed consent was provided electronically. Two reminder messages were used to reduce the non-response bias by two weeks. Response rate was 83% (600 sent, 500 received back; 100 not received back).

3.5 Data Analysis

sem was analyzed using all python (scipy, statsmodels), and amos (v.26). an initial screening of data was done to identify missing values (none found), outliers (seen through mahalanobis distance; none greater than the critical 2(2) value), and normality (kolmogorov smirnov tests demonstrated approximately normal distributions of all variables). pearson correlations characterized bivariate associations. the predictive utility of academic stress and the three coping composites to academic motivation was estimated using multiple linear regression. sem was utilized to estimate the direct effects of stress on motivation and the three indirect (mediated by coping) effects at the same time. indirect effects were tested using bootstrap confidence intervals (5,000 resamples) because bootstrapping is the preferred method of testing indirect effect when the sample size is small-to-moderate (preacher and hayes, 2008). the significance level was established as α =. 05 (two-tailed) all along.

4. RESULTS

4.1 Descriptive Statistics

Table 1 shows the descriptive statistics of all the variables of the study. The sample indicated a fairly high academic stress (M = 60.07, SD = 9.81), which is in line with the Pakistani university settings recorded in the previous literature (Hussain, 2020; Kausar, 2010). Academic motivation was at a moderate level (M = 54.88, SD = 9.60). Problem-focused coping was most commonly supported (M = 50.25, SD = 7.82) followed by emotion-focused coping (M = 45.98, SD = 9.09) and avoidant coping (M = 40.33, SD = 9.84), indicating that, on the whole, this sample seems to be oriented toward adaptive rather.

Table 1 Descriptive Statistics for Academic Stress, Coping Strategies, and Academic Motivation (N = 500)

Variable	N	Mean	SD	Min	Max
Academic Stress	500	60.07	9.81	27.59	98.53
Problem-Focused Coping	500	50.25	7.82	28.42	71.06

Emotion-Focused Coping	500	45.98	9.09	18.93	68.42
Avoidant Coping	500	40.33	9.84	10.60	71.93
Academic Motivation	500	54.88	9.60	24.80	86.10

Note. All variables rescaled to a common 0–100 metric for interpretive comparability. SD = Standard Deviation. Min = Minimum; Max = Maximum.

4.2 Correlation Analysis

Table 2 shows Pearson correlations. The relationship between academic stress and academic motivation was also found to be insignificant (r =.01, p>0.05) and therefore, stress level was not found to be a reliable indicator of student difference based on motivational outcome. Problem-focused coping had a weak positive (non-significant) relationship with motivation (r = .03), emotion-focused coping a weak positive relationship (r =.04), and avoidant coping the strongest, although not significant, positive relationship (r =.09, p<.10). Interestingly, the three coping strategies had low levels of inter-correlations (all r <.10), which implies that they are relatively independent of each other and thus can be included separately in regression analyses.

Table 2 Pearson Correlation Matrix for All Study Variables (N = 500)

Variable	1	2	3	4	5
1. Academic Stress	1.00	.08	.06	.06	.01
2. Problem-Focused Coping	.08	1.00	.08	.02	.03
3. Emotion-Focused Coping	.06	.08	1.00	.02	.04
4. Avoidant Coping	.06	.02	.02	1.00	.09†
5. Academic Motivation	.01	.03	.04	.09†	1.00

Note. N = 500. Values are Pearson r. †p < .10.

4.3 Multiple Regression Analysis

Table 3 shows the multiple regression model of academic stress as a predictor of academic motivation and the three coping strategies. The model was statistically non-significant, F (4, 495) = 1.37, p = .243, and explained only 1.1% of the variance in motivation (R^2 = .011, adjusted R^2 = .003). Academic stress (β = .007, p = .941), problem-focused coping (β = .028, p = .543), and emotion-focused coping (β = .047, p = .289) did not significantly predict motivation. The only marginally significant predictor was avoidant coping (β =.088, p =.050) meaning that avoidant coping marginally, not significantly, predicted higher reported motivation scores in a bivariate setting; but the predictive significance is trivial and should be viewed with some caution as it was not shown how avoidant coping controlled the unmeasured confounds.

Table 3 Multiple Regression Analysis Predicting Academic Motivation from Academic Stress and Coping Strategies (N = 500)

Predictor	B	SE	β	p
Intercept	59.17	4.81	—	< .001
Academic Stress	0.003	0.044	.007	.941
Problem-Focused Coping	0.034	0.055	.028	.543
Emotion-Focused Coping	0.050	0.047	.047	.289
Avoidant Coping	0.086	0.044	.088†	.050

Note. N = 500. R^2 = .011, F(4, 495) = 1.37, p = .243. Dependent variable: Academic Motivation. †p = .050.

4.4 SEM Mediation Analysis

Table 4 shows the SEM indirect-effect estimates of the three mediation pathways that have been hypothesized. The a-paths (stress = coping strategy) were of equal size: predicting problem-focused coping (β = .054), emotion-focused coping (β = .064), and avoidant coping (β =.064) were found to be that the higher the stress levels were in the students, the less significant the increases in the coping strategies. All b-paths (coping strategy to motivation) were insignificant (range of beta: .003 to.011). As a result, all the bootstrapped indirect effects were very small (range: .0002 to .0006) and non-significant (all p >.80). The hypothesis that the stress-motivation relationship is mediated by coping strategies, was not supported. The SEM global model fit indices were satisfactory: CFI =.96, RMSEA =.03 [90% CI: .00, 0.07], SRMR =.04, which showed that it fit the data satisfactorily.

Table 4 SEM Bootstrapped Mediation Analysis: Indirect Effects of Academic Stress on Academic Motivation through Coping Strategies (N = 500)

Mediator	a-path (β)	b-path (β)	Indirect Effect	p (Bootstrap)
Problem-Focused Coping	.060	.006	.0004	.888
Emotion-Focused Coping	.054	.011	.0006	.810
Avoidant Coping	.064	.003	.0002	.953

Note. N = 500. SEM estimated via AMOS. Bootstrap resamples = 5,000. No indirect effect reached significance (all p > .80). a-path = effect of Academic Stress on mediator; b-path = effect of mediator on Academic Motivation.

5. DISCUSSION

5.1 The Negligible Direct Effect of Stress on Motivation

The most counterintuitive result of this study, perhaps, is that academic stress with its moderately high levels as reported by the sample had a small and statistically non-significant direct impact on academic motivation (β = .007, p = .941). This finding is contrary to the literature carried out in Western settings on moderate-to-strong negative stress-motivation relationships are generally reported (Schaufeli et al., 2002), yet it aligns with the cultural specificity argument put forward by Kausar (2010) and Hussain (2020). The educational situation in Pakistan suggests that high extrinsic motivational pressures, such as parental expectation, socioeconomic mobility needs, grade-related career pathways, can offset the intrinsic motivational drainage that stress normally brings about. Even when under considerable stress, students can be kept under

external regulation and continue to be behaviourally engaged in academic pursuits with intrinsic motivational loss. Future studies ought to break down the global scores on motivation in order to determine whether stress is a selective destroyer of intrinsic motivation, and a powerful reinforce of extrinsic motivation as SDT would anticipate.

5.2 Coping Strategies as Limited Predictors of Motivation

The result that problem-based and emotion-based coping do not significantly predict motivation is somewhat contradictory to the general coping literature (Compas et al., 2001; Khan et al., 2021). There are some explanations that are worth considering. The combination of Brief COPE subscales into three overarching composites can mask differentiated effects of particular facets: e.g. active planning and positive reframing might have different motivational implications which cancel when combined with help-seeking and acceptance. In addition, the overall low explained variance (R^2 =.011) indicates that the predictor set is all too weak and that the most important motivational determinants were not measured most likely, teaching quality, peer academic culture, institutional support services, and self-efficacy, which theory and evidence all implicate as proximal motivation drivers (Ryan and Deci, 2017; Bandura, 1997).

The borderline meaningful positive correlation between avoidant coping and motivation (β = .088, p = .050) should be interpreted with caution. In theory, avoidant coping should be able to inhibit motivation (Zimmer-Gembeck and Skinner, 2011). The described trend might be a methodological artefact: students whose extrinsic motivation is not completely depleted might temporarily disengage in academic activities (avoidance) just to cope with the anxiety of high motivation-pressure combinations - a trend also predicted by the self-worth protection theory (Covington, 1992). The cross-sectional design, as an alternative, will not allow causal inference, and it cannot be ruled out that lower motivation causes more avoidance (reversed causation).

5.3 Absence of Coping-Mediated Pathways

The non-significant SEM mediation estimates reflect that coping strategies are not useful through which academic stress can be mediated to motivation in this sample. The homogenously weak a-paths indicate that exposure to stress does not discriminate students on coping repertoires to a significant degree- a result that could also be indicative of a lack of stress induced variability in coping among students in a sample in which stress is relatively homogeneously increased. Alternatively, habitual coping can be predispositionally fixed and can be quite unresponsive to situational variability of stress over a limited range (Carver and Connor-Smith, 2010).

These null mediation findings are theoretically implicative. They suggest that interventions that aim to change only the coping strategies (e.g., cognitive-behavioural stress-management workshops) will seldom lead to significant motivational benefits, alone. This changes the focus of intervention to larger contextual intervention; to curriculum design that allows the experience of autonomy and competence, teaching practice that offers a constructive and timely feedback, and institutional support systems that respond directly to socioeconomic stressors.

5.4 Implications for Theory

The current results indicate that the Transactional Model of Stress and Coping and SDT need to be contextually calibrated to be used in Pakistani higher education contexts. The small and insignificant coping mediation effects question a simple transactional stress model where individual coping is the major regulatory factor. A more integrative approach is given by the Conservation of Resources Theory (Hobfoll, 2002): in case institutional resources (counselling, mentorship, financial support) are systematically inadequate, individual coping variability might not be adequate to bring about motivational differentiation, since the system-level resource shortage overpowers all within-person variation. This reading undergirds the theoretical incorporation of macro-level institutional factors in stress-and-coping models to developing-country educational settings.

5.5 Practical Implications

these findings have a number of actionable implications to university administrators and policymakers at gcuf, uaf, ntu, tuf and ruf, and more generally, to pakistani higher education. to begin with, the non-existence of meaningful coping-mediated effects suggests that only individual-level stress-reduction workshops can be considered as motivational interventions; the systemic reforms aimed at the quality of the learning environment should be justified. second, as avoidant coping was the only predictor related, even in a marginal manner, with motivational outcomes, specialized programmes to decrease procrastination and enhance active academic activities (e.g., organized peer learning communities, time-management coaching as a part of the curriculum) are high-leverage interventions compared to generic stress awareness campaigns. third, according to sdt, establishing autonomy-supportive teaching conditions, which are defined by choice, providing reasons, and recognition of student viewpoints is likely to maintain intrinsic motivation regardless of stress levels. fourth, the mental health and academic counselling services need to be increased and destigmatised and it is important to realize that students who are subjected to chronic stress and lack professional help are not likely to develop the adaptive coping repertoires on their own.

6. Conclusion

this research examined both direct and indirect connections between academic stress, coping styles, and academic motivation of 500 pakistani university students using sem. there are three key findings. first, academic stress is not a consistent predictor of academic motivation in this regard, indicating that extrinsic motivators that vary among cultures might prevent the intrinsic motivational decay that stress is likely to cause in western samples. second, avoidant coping strategies were the only coping strategies that showed a marginal relationship with motivation, with problem-focused and emotion-focused coping being non-significant predictors. third, there was no significant coping strategy that mediated the stress-motivation relationship which means that contextual, institutional and socio-cultural stressors outside of individual coping influence the motivational outcome to a significantly more significant extent.

the results contribute to the body of knowledge on sem by offering evidence on stress-coping-motivation relationships within a multi-university pakistani sample that makes the received western narrative of stress-coping-motivation appear overly simplistic, putting more emphasis on systemic contextual factors in the development of higher education in developing countries. they are also directly relevant to policy: sustainable changes in student motivation in pakistani universities cannot be expected to be precipitated by stress-management interventions but will need integrated efforts to support the institutional learning environment, increase the counselling infrastructure, and embrace autonomy-supportive pedagogical approaches.

it has a number of limitations. the cross-sectional type does not allow making causal inferences. there could be some social desirability bias in self-reported coping and motivation. the combination of brief cope subscales might have masked differences in effects of individual aspects of coping. no measures of self-efficacy, perceived faculty support, socioeconomic status, or peer academic culture (theoretically proximal to motivation) were made. such predictors, disaggregated motivation subscales, and within-person experience-sampling techniques should be considered in future longitudinal studies to identify within-person stress-motivation interactions across the school year. especially, intervention research examining the effectiveness of the autonomy-supportive pedagogies and structured academic counselling programmes is required.

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