

WOMEN, EDUCATION, AND SOCIAL WELFARE
VOL. 3 NO. 3 (2026)

ISSN: 3064-2469

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To cite this article: B. D. Shibghatallah and N. Hidayah, "Religiosity and Academic Flow in Islamic Higher Education: The Mediating Role of Self-Efficacy and Implications for Student Support," *Women, Educ. Soc. Welf.*, vol. 3, no. 3, pp. 1271–1284, 2026. https://doi.org/10.70211/wesw.v3i3.291

Published online: September 30, 2026

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https://doi.org/10.70211/wesw.v3i3.291

Women, Education, and Social Welfare Vol 3 No 3 (2026)

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Research Article

Religiosity and Academic Flow in Islamic Higher Education: The Mediating Role of Self-Efficacy and Implications for Student Support

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Received: June 21, 2026	Revised: July 15, 2026	Accepted: September 23, 2026	Online: September 30, 2026

Abstract

Academic flow offers a perspective on the quality of student engagement, yet its psychological correlates in Islamic higher education remain insufficiently integrated. This study examined the association between religiosity and academic flow through self-efficacy among 320 third- and fifth-semester students drawn proportionately from five study programs at Mataram State Islamic University, Indonesia (population = 1,590). Religiosity, self-efficacy, and academic flow were assessed using researcher-developed four-point Likert scales, and a regression-based mediation model was estimated in JAMOVI 2.6.45. The indirect association was positive (estimate = 0.491, SE = 0.0536, 95% CI [0.386, 0.595], $p < .001$); the direct association also remained positive (0.312, 95% CI [0.201, 0.423], $p < .001$). The reported indirect pathway accounted for 61.1% of the total association, consistent with partial statistical mediation. These cross-sectional associations do not establish causal ordering. The findings suggest that supportive learning environments could attend to both students' meaning-related resources and their academic capability beliefs, without presuming that religiosity alone produces engagement.

Keywords: Academic Flow, Islamic Higher Education, Religiosity, Self-Efficacy, University Students

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INTRODUCTION

Universities are increasingly expected to attend not only to attainment but also to students' psychological experience of learning. Academic flow denotes a state of sustained concentration, task involvement, and enjoyment in which learners experience an appropriate balance between challenge and perceived ability. A systematic evaluation links learning flow with academic performance, although variation across study designs cautions against treating flow as an automatic cause of achievement [1]. Research on undergraduate lectures similarly associates flow with engagement, understanding, and grades [2]. University-based evidence also connects flow with subjective well-being, while indicating that these constructs should be distinguished conceptually [3].

Flow has practical relevance for student-support services because attention, interest, emotional energy, and perceived competence jointly shape the experience of academic demands. Psychological capital has been linked with student outcomes through flow-related mechanisms [4]. Nevertheless, academic flow should not be reduced to examination performance: concentration, enjoyment, and interest represent the experiential dimensions operationalized in the present study. Because educational and psychosocial conditions are not equally distributed, the identification of psychological correlates of flow may inform more inclusive support rather than a one-size-fits-all intervention.

Within this broader account of academic engagement, religiosity and self-efficacy warrant consideration as distinct psychological resources. Religiosity is treated here as a multidimensional personal orientation involving intellectual involvement, ideology, public practice, private practice, and religious experience. This definition follows the Centrality of Religiosity Scale, which measures the salience of religious meanings in people's lives, rather than equating religiosity with one observable ritual [5]. The study does not assume that religious commitment is uniformly beneficial, nor that spiritual concentration and academic flow are interchangeable. Instead, meaning-making and emotion regulation are proposed as context-dependent interpretive possibilities.

Self-efficacy differs from religiosity: it concerns beliefs about one's capability to organize and execute actions needed to manage tasks. Its theoretical foundation is social cognitive theory [6]. Motivation research further differentiates intrinsic interest from externally regulated participation, indicating why valued goals and feelings of competence may jointly matter for learning [7]. A systematic review of university learning identifies self-efficacy as relevant to student motivation across subject-specific contexts [8].

Empirical evidence supports examining self-efficacy as a proximal correlate of engagement. A large college sample demonstrated links between academic self-efficacy, resilience, professional commitment, and learning engagement, with gender considered in that study [9]. Indonesian multi-university data similarly identify academic self-efficacy as a mediator between adverse learning experiences and engagement [10]. In digital learning, flow and self-efficacy also have related but non-identical roles [11]. These findings justify an integrated mediation model without implying that identical pathways must hold in every university context.

These theoretical and empirical considerations provide the basis for examining the university context. The present research was conducted among third- and fifth-semester

students at Mataram State Islamic University. An exploratory inquiry on 3 December 2025 involved interviews with 20 students. Ten students (50%) reported difficulties sustaining concentration, 17 (85%) reported low enjoyment or comfort in learning, and 15 (75%) reported limited interest in the course material. The responses also described fatigue, sleepiness, mood instability, workload pressure, difficulties managing time and emotions, and personal challenges. These are contextual observations from a small preliminary group, not prevalence estimates for the university population. Figure 1 displays the original counts and percentages without extrapolation.

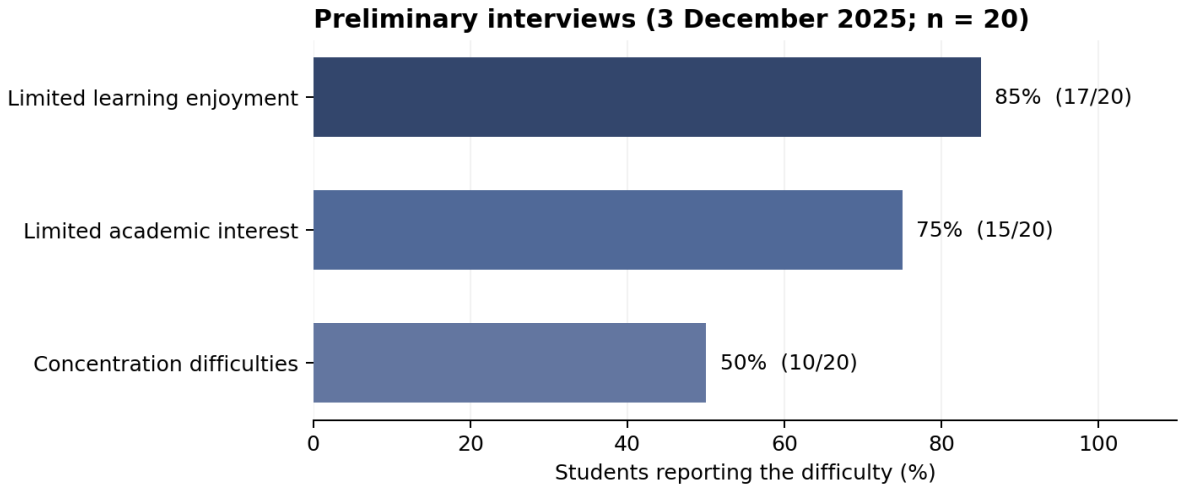


Figure 1. Difficulties mentioned during the preliminary interviews (n = 20). Percentages and counts are copied from the original inquiry; respondents could mention more than one difficulty.

The contextual observations can be situated alongside research on other predictors of learning flow. Studies of nursing students have identified learning flow as a mediator of associations between learning presence and achievement [12], while distance-learning evidence points to several academic predictors beyond individual traits [13]. Research on online university learning also connects instructional design and motivation with flow [14]. Likewise, optimism has been examined in association with learning flow [15], and challenge-based learning environments have been associated with motivation and flow outcomes [16]. Such work underscores the importance of testing a specific explanatory model rather than assuming that an isolated bivariate association sufficiently accounts for academic experience.

Religious or spiritual coping is linked with emotional regulation and well-being in university students, but those outcomes are not equivalent to academic flow [17]. A recent university study likewise linked religiosity and lifestyle beliefs with life satisfaction while noting the relevance of sociodemographic context [18]. These findings suggest that religiosity may be relevant to academic experiences indirectly, through psychological resources such as perceived capability, without warranting causal claims. Meanwhile, evidence on gender-moderated academic self-concept and self-efficacy suggests that subgroup-sensitive reporting matters when drawing equity-related implications [19]. The current data do not contain a reported gender-stratified mediation result; consequently, the present study cannot infer differences between women and men.

The gap addressed is therefore specific: an integrated test of whether self-efficacy statistically accounts for part of the association between religiosity and academic flow in a defined Islamic-university sample. The study examines the following question: To what extent is the relationship between religiosity and academic flow statistically mediated by self-efficacy among participating students? The proposed model is associative and should not be read as a demonstrated temporal sequence.

METHODS

Design, population, and sampling

This study employed a quantitative, observational, cross-sectional mediation design. Religiosity was the predictor (X), self-efficacy the proposed mediator (M), and academic flow the outcome (Y). The population comprised 1,590 active undergraduate students in the third and fifth semesters from five programs: Islamic Religious Education, Islamic Family Law, Islamic Communication and Broadcasting, Qur'anic Studies and Exegesis, and Sharia Economics. The original study reports proportionate stratified random sampling across the ten program-by-semester strata and a final sample of 320 students, calculated with a 5% margin of error using Slovin's formula. No unreported stratum counts, exclusion rates, sex distribution, or response-rate estimates have been reconstructed.

Measures and scoring

Three researcher-developed questionnaires were used. The religiosity scale initially contained 35 items organized around the five domains of religious centrality [5]. The self-efficacy scale initially contained 33 items organized around level, strength, and generality, as described in the source manuscript in reference to social cognitive theory [6]. The academic flow scale initially contained 33 items representing concentration, enjoyment, and interest. Each questionnaire used four response categories from strongly disagree to strongly agree, with reverse scoring for negatively phrased statements. Higher composite scores denoted higher levels of each construct. The supplied manuscript does not report the observed retained-item counts, example items, final scale score ranges, or observed reliability coefficients; these should not be inferred from the initial item counts.

Table 1. Measurement design specified in the source manuscript (planned instrument characteristics, not post-validation results).

Scale	Initial items	Dimensions	Response format
Religiosity	35	Intellectual; ideology; public practice; private practice; experience	4-point Likert
Self-efficacy	33	Level; strength; generality	4-point Likert
Academic flow	33	Concentration; enjoyment; interest	4-point Likert

Content validity and reliability assessment

The source manuscript specifies expert evaluation of content validity with Aiken's V, using a proposed acceptance threshold of $V \geq 0.80$. Aiken's coefficient is an appropriate framework for quantifying agreement in content judgments [20]. Subsequent item screening reportedly used corrected item–total correlations with an intended cut-off of 0.30. The manuscript also states an intended Cronbach's alpha threshold of 0.80; alpha is a recognized index of internal consistency [21], although it should not by itself be treated as sufficient evidence of construct validity or unidimensionality [22]. Construct validation requires clarity about item content, score interpretation, and empirical structure [23]. Because the expert panel size, item-level V coefficients, item retention results, observed alpha coefficients, and factor structure were not provided, no numerical claims about achieved instrument quality are made in this revision.

Procedure, ethics, and data management

According to the source manuscript, permission was obtained from the relevant academic authorities, participants were informed of the study objectives and procedures, consent was sought, participation was voluntary, and responses were collected without direct personal identifiers. The supplied document does not provide a research-ethics approval number, exact survey administration dates, or a data-access statement. These administrative details require author confirmation before submission. The preliminary interviews and the principal survey are reported separately to avoid combining exploratory observations with the N = 320 inferential sample.

Statistical analysis and interpretation

The source analysis used JAMOVI version 2.6.45 and the medmod module. The regression-based model estimated the total association between religiosity and academic flow, the direct association conditional on self-efficacy, and the indirect association through self-efficacy. The reported output provides estimates, standard errors, z statistics, p values, and 95% confidence intervals for indirect, direct, and total effects. Common-source self-report measurement can inflate apparent associations, and procedural or statistical checks are relevant to interpretation [24]. Contemporary research likewise warns that method bias may be complex and not eliminated by a single diagnostic [25].

Reporting follows the principle that estimates and uncertainty intervals should be shown rather than significance tests alone, as recommended in mediation-reporting guidance [26]. Methodological reviews emphasize the assumptions needed for causal interpretation of indirect effects in observational data [27]. A cross-sectional mediation model does not establish temporal order and may yield biased interpretations of longitudinal processes [28]. In the absence of raw data and path-specific coefficients a and b, those coefficients, effect standardization, bootstrapping details, confounder adjustment, model fit, and diagnostics are explicitly treated as unverified rather than supplied retrospectively.

RESULTS AND DISCUSSION

Results

Contextual evidence from the preliminary inquiry

Figure 1 reports the exploratory interview results exactly as described in the original document. The highest frequency of reported difficulty concerned enjoyment (17 of 20; 85%), followed by interest (15 of 20; 75%) and concentration (10 of 20; 50%). Because the exploratory interviews were not the 320-student analytical sample, these percentages should not be interpreted as descriptive statistics for the model sample.

Mediation estimates

Table 2 reproduces all numerical quantities available in the original JAMOVI mediation summary, including precision and reported proportions. The indirect association of religiosity with academic flow through self-efficacy was estimated at 0.491 (SE = 0.0536, z = 9.16, p < .001), with a 95% confidence interval of [0.386, 0.595]. As the interval excludes zero, the data support a statistically detectable indirect association. The direct estimate was also positive (0.312, SE = 0.0565, z = 5.53, p < .001, 95% CI [0.201, 0.423]), consistent with partial rather than complete statistical mediation.

Table 2. Regression-based mediation summary (all numeric values retained from the original manuscript).

Effect	Estimate	SE	95% CI	z	p	% total
Indirect	0.491	0.0536	0.386–0.595	9.16	< .001	61.1
Direct	0.312	0.0565	0.201–0.423	5.53	< .001	38.9
Total	0.802	0.0657	0.674–0.931	12.21	< .001	100.0

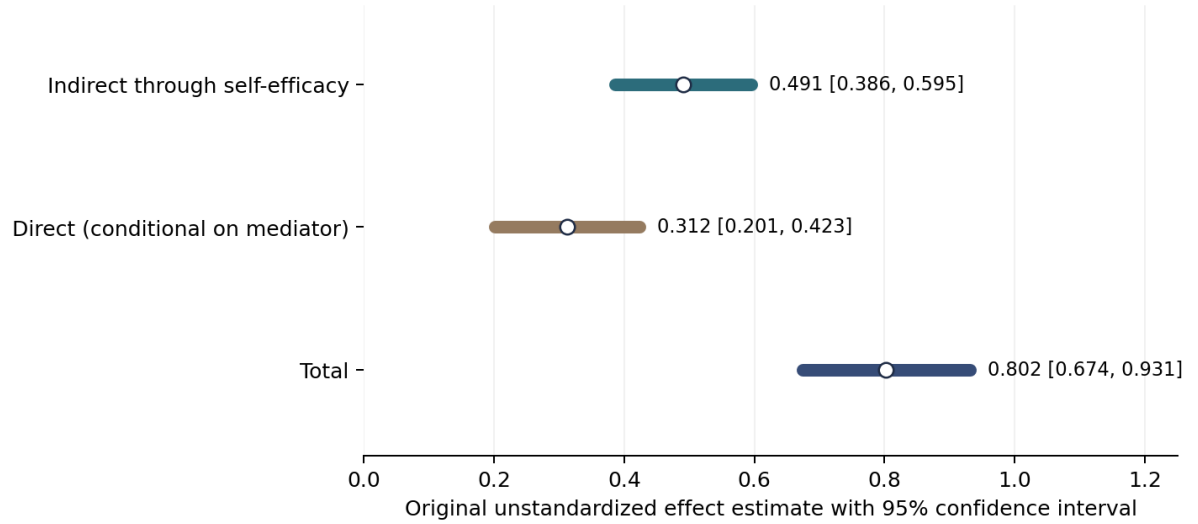


Figure 2. Direct, indirect, and total estimates with their original 95% confidence intervals. Horizontal lengths depict intervals; the graphic does not represent an intervention effect.

The reported total effect was 0.802 (SE = 0.0657, z = 12.21, p < .001, 95% CI [0.674, 0.931]). The reported mediated proportion was 61.1%, compared with 38.9% for the direct component. These percentages describe the partition of the model-reported association, not the proportion of students affected, the percentage of flow caused by religiosity, or the explained variance of academic flow. The sum of the displayed direct and indirect point estimates is 0.803 rather than 0.802; this 0.001 discrepancy is attributable to the precision shown in the source summary and is not changed or resolved by inventing hidden digits.

Relationship structure and limits of available output

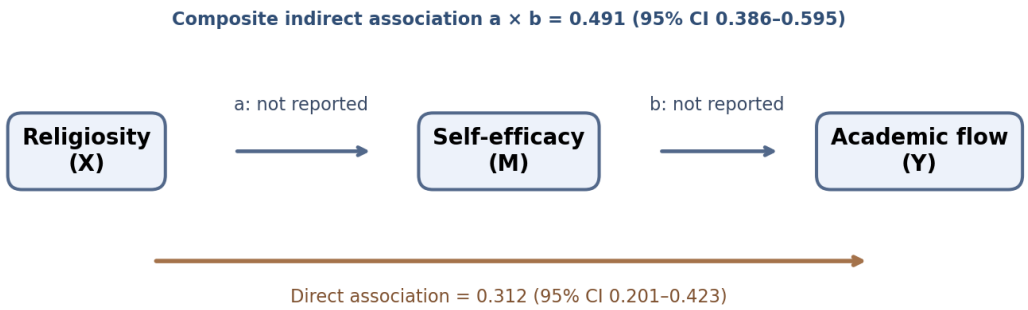


Figure 3. Statistical mediation specification. Component paths a and b were not available in the supplied output; only the composite indirect and direct estimates are reported.

Figure 3 schematically represents the predictor, proposed mediator, and outcome, while preserving the distinction between individual path coefficients and the composite indirect effect. The original table does not report the component estimates for religiosity → self-efficacy (path a) and self-efficacy → academic flow controlling for religiosity (path b), so they are intentionally not displayed as numbers. The original narrative also mentions values of 31.6% and 59.8% as explained variance in separate models, but no corresponding model summaries, dependent-variable specifications, or R^2 tables are supplied. Those two unverified contextual figures are therefore not promoted into newly constructed results tables.

Discussion

Interpreting the partial statistical mediation

The central result is not simply that religiosity and academic flow are associated. Rather, the observed association contains a statistically detectable indirect component involving self-efficacy, alongside a remaining direct component. Under a social cognitive interpretation, students' capability judgments may help explain why meaning-related personal orientations coincide with concentration, interest, and enjoyment during learning [6]. This interpretation is consistent with research showing that self-efficacy and resilience are related to academic motivation [29], and that academic engagement can be statistically linked to learning self-efficacy and self-monitoring [30]. Nonetheless, the data cannot show that strengthening religious beliefs first changes self-efficacy and subsequently causes academic flow.

Cross-context research supports self-efficacy as a meaningful candidate mechanism while also revealing contextual heterogeneity. Medical education data demonstrate pathways linking motivation, self-efficacy, engagement, and achievement [31]. In Chinese higher education, classroom climate and teacher leadership are also linked to motivation through self-efficacy [32]. Thus, self-efficacy should not be interpreted as an exclusively individual attribute detached from teaching, course demands, feedback, and institutional support. In a Malaysian distance-learning setting, self-efficacy was examined together with learning environment and instructor interaction [33], while work on technology-related learning motivation has likewise tested mediated mechanisms [34].

Religiosity, coping, and the possibility of alternative pathways

The positive direct component indicates that the statistical model does not account for the entire religiosity–flow association through self-efficacy. Several theoretically plausible alternatives exist: perceived meaning in study, self-regulation, emotion regulation, supportive relationships, or different interpretations of stress. Research with university students links religious/spiritual coping to emotion-regulation processes and well-being [17], while work on religious beliefs and life satisfaction situates such relationships within broader demographic contexts [18]. These are hypotheses for future testing, not variables measured in the present mediation output.

Independent evidence in a college sample has modeled spirituality together with self-efficacy, suggesting that the constructs can be associated without being identical [35].

It would also be inappropriate to claim that greater religiosity is invariably protective. A study using machine-learning approaches in Muslim societies reported that religion/spirituality was not among the dominant predictors of students' self-efficacy, indicating that cultural meaning alone need not translate into strong capability beliefs [36]. More generally, self-efficacy can be shaped by concrete study experience, learning design, achievement feedback, and emotional conditions. Flow can emerge when demands are sufficiently challenging but manageable, not simply when students hold a particular value orientation [11], [37].

Cognitive engagement, learning environments, and student support

The present result has a practical implication for inclusive student support: academic counseling can address students' confidence in tackling coursework while also making space for personally meaningful goals. Online-learning research has linked satisfaction and perceived learning with self-efficacy, regulation, and instructor immediacy [38]. Research also indicates that off-task multitasking can disrupt attention during class [39]. These findings suggest that universities should attend to pedagogical task design, workload, concentration, sleep and fatigue, peer support, and feedback quality, alongside individual psychological resources.

The proportion of the indirect pathway (61.1%) should not become a claim that interventions focused on self-efficacy will produce an equivalent improvement in flow. A recent investigation of time management and psychological resilience shows that self-efficacy functions within a network of self-regulatory resources [40]. Meta-analytic work similarly identifies several psychosocial and study-skill predictors of college outcomes [41]. In practical terms, universities could pilot low-risk supports—structured feedback, achievable milestones,

accessible counseling, and reflective goal-setting—then evaluate their effects prospectively instead of treating this observational estimate as intervention evidence.

Equity and institutional implications

Student-support policies must also be responsive to unequal opportunities and varying psychosocial conditions. Evidence that gender may moderate relations among academic self-concept, motivation, and self-efficacy motivates a gender-sensitive evaluation strategy [19]. However, the present dataset as reported contains no disaggregated analyses by sex or gender, no subgroup estimates, and no measured gendered barriers. Therefore, it cannot establish whether the mediation model differs among female and male students. Future research should document sex/gender categories transparently, avoid treating them as interchangeable, and test measurement comparability before group-specific interpretations. This is particularly important if the findings are used to guide equitable academic and welfare services.

What the findings contribute—and do not establish

The contribution of the study is a locally situated, integrated test of the indirect statistical association between religiosity and academic flow via self-efficacy, rather than the discovery of a new psychological law or an effect unique to Islamic universities. It extends earlier work by presenting a mediation estimate with its uncertainty interval, not merely separate correlation coefficients. At the same time, the conclusions remain narrower than causal descriptions would allow. The reporting literature emphasizes explicit definition of the mediator, outcome, confounders, estimation approach, and limitations [26], and methodological studies show that effects decomposed from a single measurement occasion are not equivalent to validated longitudinal pathways [28].

CONCLUSION

Among 320 third- and fifth-semester students from five study programs at Mataram State Islamic University, religiosity was positively associated with academic flow through a statistically significant indirect pathway involving self-efficacy (0.491, 95% CI [0.386, 0.595], $p < .001$). The direct association remained positive (0.312, 95% CI [0.201, 0.423], $p < .001$), indicating partial statistical mediation in the estimated model. The model-reported indirect component represented 61.1% of the total association. These results support self-efficacy as a potentially relevant correlate of engaging academic experiences, without establishing that religiosity causally raises self-efficacy or flow. Student-support programs may therefore consider capability-building strategies together with individually meaningful learning goals, subject to prospective evaluation and equitable access.

LIMITATIONS

This research is limited by its single-university setting; restriction to students in five programs and two semesters; use of self-reported measures; a cross-sectional model that cannot demonstrate temporal sequencing; lack of reported gender-stratified effects; and incomplete reporting of measurement validation, participant demographics, path-specific regressions, covariates, and resampling settings. The absence of raw data prevents independent verification

of the model or estimation of additional statistics. Future studies should use repeated measures or experimental designs, report instrument quality and full path estimates, examine potential confounding, include gender-sensitive and other equity-relevant analyses where justified, and evaluate whether capability-building supports improve academic flow prospectively.

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AUTHOR CONTRIBUTIONS

B.D.S. Conceptualization, methodology, investigation, data curation, formal analysis, interpretation, visualization, and writing—original draft. N.H. Methodology, validation, supervision, literature review, interpretation, and writing—review and editing. Both authors reviewed and approved the final manuscript.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DECLARATION OF USE OF AI IN SCIENTIFIC WRITING

ChatGPT assisted with language editing, structural refinement, and reference organization. Responsibility for the accuracy of the content, citations, and interpretations, and for approval of the final manuscript, rests with the authors.

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