

# The Impact of the Stress Management in Improving the Instructor's Professional Efficacy in Mariners Polytechnic Colleges Foundation (MPCF) in Canaman, Province of Camarines Sur

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## Abstract

Background: Teaching in maritime higher education places simultaneous demands on instruction, assessment, student support, and administrative work. Objective: The study described stress management and perceived professional efficacy among instructors at a Philippine maritime college, and compared rank patterns across program-size groups. Methods: A cross-sectional questionnaire was administered to 39 instructors during the second semester of academic year 2025–2026. The 80-item instrument covered five stress management and six perceived efficacy domains. Domain means and published Kendall concordance statistics were summarized. Results: The mean stress management score was 3.28/5, with emotional regulation (3.53) and professional role management (3.50) highest and interpersonal resilience (2.92) lowest. The mean perceived efficacy score was 2.97/5; professional commitment (3.24) was highest and student engagement (2.78) lowest. The source tables report rank agreement for interpersonal resilience ( $W = 0.82$ ) and classroom management ( $W = 0.85$ ), based on three program-size groups; these analyses require checking against the original ranks and treatment of ties. Conclusion: Faculty reported practices and perceived functioning in the “Evident” range, with identifiable areas for local support. Cross-sectional self-report scores cannot establish that stress management caused gains in professional efficacy.

## Keywords

Faculty Well-Being; Higher Education; Maritime Education; Professional Efficacy; Stress Management.

## 1. Introduction

Instructors in maritime higher education balance teaching, student support, assessment, administrative work, and compliance with professional standards. These demands make stress management relevant to both faculty welfare and the continuity of instruction. Research on teacher stress has documented links with burnout and work conditions [1], while reviews of teacher interventions suggest that institutional support should accompany individual coping efforts [2]. Classroom emotion regulation and confidence in managing instruction are also pertinent to educators’ daily work [3, 4].

This investigation focuses on faculty working at Mariners Polytechnic Colleges Foundation of Canaman during the second semester of academic year 2025–2026. It asks how instructors rated five areas of stress management and six areas of perceived professional efficacy, and whether the three program-size groups placed the component items in similar rank order. The latter analysis concerns agreement in rankings, not a correlation between individual instructors’ stress management and

efficacy scores. The findings can guide local planning while leaving causal questions for a different design.

### 1.1 Study context and rationale

Maritime higher education brings together classroom teaching and professional preparation for regulated occupations. Instructors may have to prepare lessons, monitor student progress, document outcomes, and coordinate with colleagues and administrators. These duties are not identical across programs. Program size was used to describe faculty experiences, grouping the 39 respondents into large, medium, and small instructional units. The categories describe this institution only and should not be treated as a representative sample of maritime colleges.

Research on teacher stress considers both individual and environmental factors. Carroll and colleagues examined intrapersonal and environmental correlates [5], while Maas and colleagues considered time pressure, exhaustion, and school leader support [6]. A study of Polish university academics found that excessive demands were associated with burnout and fatigue and that selected health practices offered only limited protection [20]. These findings from different settings motivate consideration of workload and resources alongside instructors' personal coping practices; they do not predict the size of any effect at MPCF.

A job demands and resources perspective frames workload, role conflict, and emotional labor as demands that may be buffered by autonomy, collegial support, and development opportunities. Self-efficacy theory offers a second lens for understanding instructors' confidence in teaching and classroom tasks. The theoretical paradigm presented in the source thesis is reproduced in Figure 2; its pathways are conceptual and were not tested as causal effects in this survey. These are interpretive lenses here rather than tested causal models: the questionnaire did not independently measure job demands and resources, and no longitudinal evidence of efficacy change was gathered. Longitudinal research on school context and teacher burnout underscores that occupational experiences may change over time [7, 8].

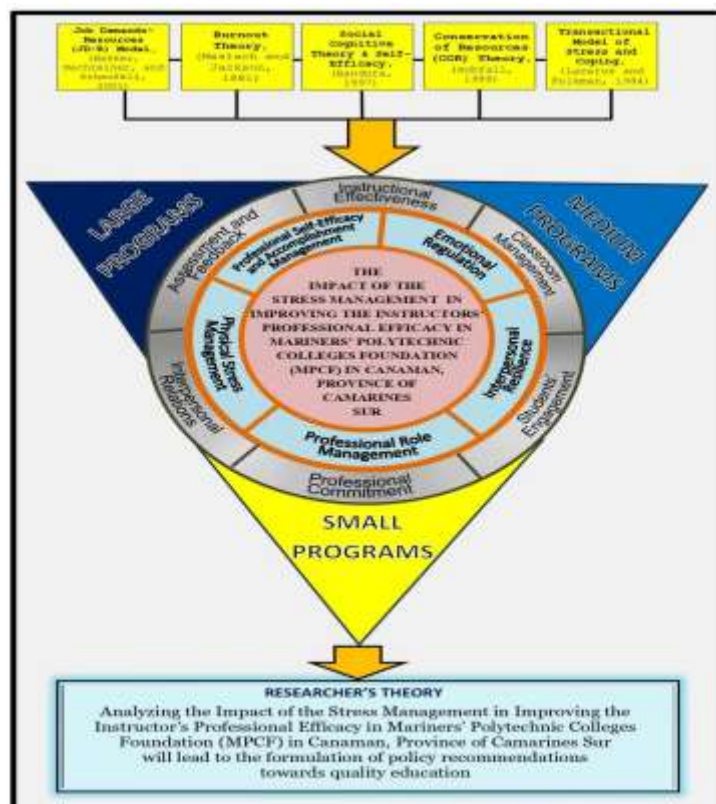


Figure 1. The theoretical paradigm reproduced from the thesis.

Stress management was operationalized broadly: emotional regulation, interpersonal resilience, professional role management, physical stress management, and management of professional accomplishment. Perceived professional efficacy covered instruction, classroom management, student engagement, commitment, interpersonal relations, and assessment. Some items overlap in content across these blocks; the study thus offers a profile of perceptions rather than a clean test between independently measured constructs. The practical aim is to identify areas that merit local attention and further measurement. The thesis's input–process–output conceptual paradigm is shown in Figure 3; its stated outcome is a proposed policy recommendation rather than an observed improvement in efficacy.

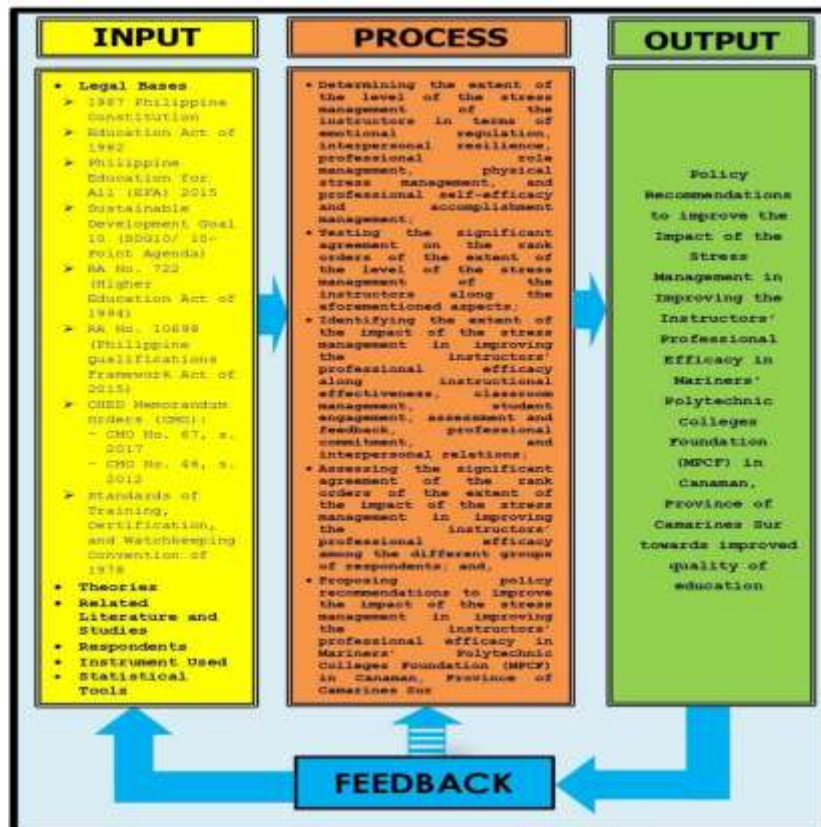


Figure 2. Conceptual paradigm reproduced from the thesis.

## 2. Materials and Methods

### 2.1 Design and setting

A descriptive, cross-sectional survey was undertaken at Mariners Polytechnic Colleges Foundation of Canaman, Camarines Sur, Philippines. The study protocol also called the design evaluative and correlational; the available analyses chiefly consist of domain means and agreement between rankings of items by program-size group. We therefore report descriptive estimates and rank concordance, without asserting an individual-level stress–efficacy correlation or an intervention effect. Figure 1 locates the study site.

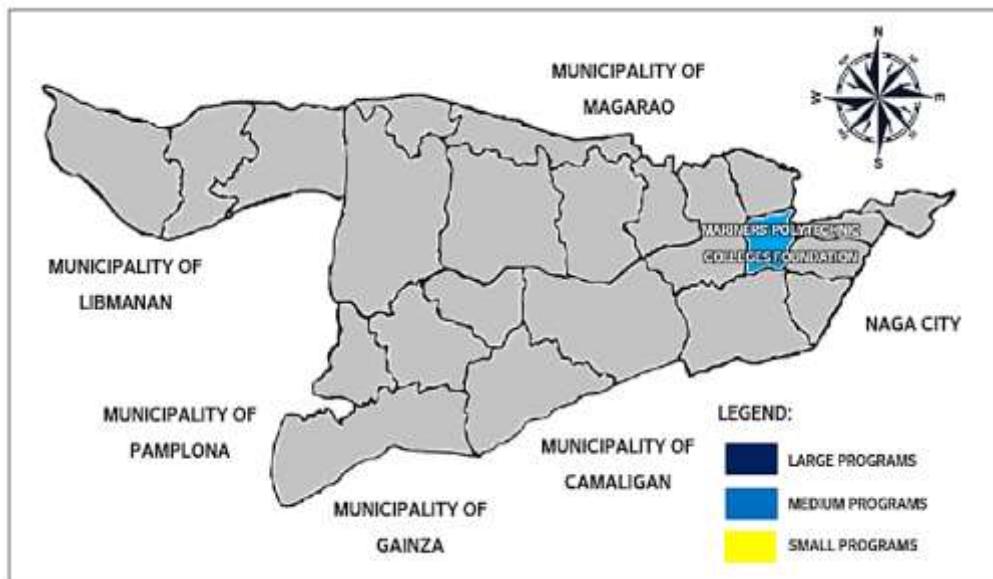


Figure 3. School location map of MPCF in Canaman, Camarines Sur.

Source: The Highway Grid Research Solutions (reproduced from the thesis).

The respondent table lists 10 instructors from Marine Transportation, 10 from the General Education Curriculum, six from Customs Administration, five from Marine Engineering, five from Cruise Ship Management, and three from Naval Architecture and Marine Engineering. These sum to 39, with 20 in the two “large” units, 16 in three “medium” units, and three in one “small” unit. Total enumeration is claimed, but a separate count of all eligible instructors, invitations, refusals, and incomplete questionnaires was not documented. The reported sample is therefore described without a calculable response rate. Each group’s disciplinary composition differs; program size is not an isolated exposure.

## 2.2 Participants and sampling

The institution listed 39 respondents in six instructional units; the program counts and grouping are specified below. No independent count of eligible instructors or response rate was provided.

The instrument follows the five research questions and assigns 35 items to stress management (items 1–35) and 45 items to perceived efficacy (items 36–80). Internal jurors, the research adviser, and an academic dean reviewed the items for content and clarity before administration. The methods chapter does not report the number of jurors or a numerical content-validity index. The manuscript consequently reports the review process without claiming a quantified validation result.

## 2.3 Instrument and measures

The researcher-developed questionnaire contained 80 items. Part I comprised 35 items addressing emotional regulation (7), interpersonal resilience (6), professional role management (7), physical stress management (8), and professional self-efficacy and accomplishment management (7). Part II comprised 45 items assessing perceived instructional effectiveness (8), classroom management (7), student engagement (6), professional commitment (7), interpersonal relations (8), and assessment and feedback (9). Responses used a five-point scale. The thesis reports review of the items by colleagues, an adviser, and an academic dean, but does not supply a reproducible content-validity coefficient or item-level validation record.

Mean ratings were classified as follows: 1.00–1.49, “Not at All”; 1.50–2.49, “Fairly Evident”; 2.50–3.49, “Evident”; 3.50–4.49, “Much Evident”; and 4.50–5.00, “Very Much Evident.” The thesis gives a reliability value of 0.821 using a calculation labeled Kuder–Richardson, but its displayed formula and five-category item format do not establish a reproducible estimate of internal consistency for these scales. Without item responses, reliability cannot be recalculated for the separate domains. The value is not interpreted as evidence that every subscale is reliable.

Frequency counts, percentages, ranks, item weighted means, and domain means were reported. With scores coded 1 to 5, the arithmetic weighted mean can be expressed as  $\Sigma(f_i x_i) / \Sigma f_i$ , where  $f_i$  is the

number choosing category  $x_i$ . The report provides the means used here but does not consistently provide standard deviations, confidence intervals, or missing-data counts. Small differences in means should therefore not be taken as tested differences. For the rank analysis, the original report used Kendall's  $W$  and the approximation  $\chi^2 = m(n - 1)W$ , where  $m = 3$  program-size groups and  $n =$  the number of items ranked in a domain. The published  $W$  and  $\chi^2$  values agree approximately under this formula after rounding. We calculated approximate  $p$  values from  $\chi^2$  with  $n - 1$  degrees of freedom. Because item ranks, tie corrections, and the original dataset were unavailable, these  $p$  values are provisional, especially with only three rankers.

## 2.4 Procedures and analysis

Institutional permission was sought before administering questionnaires in print or digital form. An ethics-committee decision, the consent language shown to participants, and a data-security protocol were not included in the available study materials. Only aggregate results are reported. Disaggregated individual responses, especially from the three-member small program, are not reproduced.

## 3. Results and Discussion

### 3.1 Stress management practices

The five stress management domain means appear in Table 1. Emotional regulation and professional role management reached "Much Evident," while the remaining domains were "Evident." Interpersonal resilience ranked lowest. The overall mean was 3.28. This summary describes the presence of practices as rated by instructors; it is not a direct measure of stress intensity or clinical well-being.

Table 1. Stress management domains (five-point scale)

| Domain                                                   | Items | Mean | Source interpretation |
|----------------------------------------------------------|-------|------|-----------------------|
| Emotional regulation                                     | 7     | 3.53 | Much Evident          |
| Interpersonal resilience                                 | 6     | 2.92 | Evident               |
| Professional role management                             | 7     | 3.50 | Much Evident          |
| Physical stress management                               | 8     | 3.18 | Evident               |
| Professional self-efficacy and accomplishment management | 7     | 3.26 | Evident               |
| Overall (reported)                                       | 35    | 3.28 | Evident               |

Open communication with students and colleagues was the strongest interpersonal resilience item (3.53), whereas responsiveness to students' academic and personal needs was lower (2.62). In physical stress management, the lowest item concerned good physical health and infrequent stress-related illness (2.87). Taken together, the item results point toward a need for supportive work conditions and accessible faculty services rather than a singular emphasis on individual coping.

The stress management profile is not uniform. Professional role management includes items on balancing administrative expectations with teaching goals (3.82) and managing multiple responsibilities (3.81), while the reported mean for professional autonomy within institutional policy is 3.19. This range matters: confidence about completing a workload may coexist with constraints over how work is organized. It would be premature to infer that faculty have adequate time or institutional control simply because they rated role management above the middle of the scale.

Emotional regulation includes recognition of stress signs and use of healthy coping strategies (4.07), but maintaining positive and supportive interactions with students despite stress was rated 2.99. Interpersonal resilience was the lowest domain mean at 2.92. Its highest item, maintaining open and positive communication (3.53), exceeded the items on empathy and responsiveness to students, which fell between 2.62 and 2.80. The contrast suggests that perceived communication and perceived

student support are not interchangeable; it is a useful question for peer discussion and follow-up inquiry.

Physical stress management scored 3.18 overall. Sleep and energy items sat near 3.3, while perceived digestive health and infrequent stress-related illness were lower, at 2.90 and 2.87. Such ratings are not medical assessments. Still, they indicate why access to appropriate workplace support should accompany training on individual coping. Reviews of teacher burnout and physical health identify a broader connection between occupational conditions and well-being [9]; the present survey cannot identify the direction or magnitude of such a relationship at MPCF. Research on university teachers in Poland found associations among demanding work conditions, burnout, and chronic fatigue, while selected health behaviors offered limited protection [20]. This provides a closer higher-education comparison but does not supply evidence about the respondents in Canaman.

The professional self-efficacy and accomplishment management domain averaged 3.26. Participation in institutional and professional development activities was rated 3.66, whereas confidence in handling classroom tasks and responsibilities was rated 2.78. The latter item is directly relevant to classroom functioning and deserves examination alongside workload, mentoring, and training opportunities. Prior research includes evidence on the interplay of teacher efficacy, reflection, emotion regulation, and burnout [10], but this descriptive study did not estimate those relations.

### 3.2 Perceived professional efficacy

The six perceived efficacy means ranged from 2.78 to 3.24 (Table 2), all within the “Evident” band. Commitment ranked highest and student engagement lowest. The overall mean was 2.97. Survey statements described the second section as the “impact” of stress management, but the resulting ratings measure perceptions at a single time point. Workload, program resources, and student characteristics were not controlled, so the differences among domains cannot be attributed to stress management.

Table 2. Perceived professional efficacy domains (five-point scale)

| Domain                      | Items | Mean | Source interpretation |
|-----------------------------|-------|------|-----------------------|
| Instructional effectiveness | 8     | 3.01 | Evident               |
| Classroom management        | 7     | 2.93 | Evident               |
| Student engagement          | 6     | 2.78 | Evident               |
| Professional commitment     | 7     | 3.24 | Evident               |
| Interpersonal relations     | 8     | 2.84 | Evident               |
| Assessment and feedback     | 9     | 3.02 | Evident               |
| Overall (reported)          | 45    | 2.97 | Evident               |

The item on active participation in school programs and initiatives had a mean of 3.53 within professional commitment. Within interpersonal relations, responding effectively to students’ emotional and academic needs was rated 2.57. Consistent with prior research on teacher emotions and classroom management [3, 4], these descriptive patterns suggest possible areas for coaching and peer exchange; they cannot establish whether those measures would improve student outcomes.

Among professional efficacy domains, assessment and feedback (3.02) and instructional effectiveness (3.01) were close to the overall score. Examples include lesson preparation under work demands (3.33), checking and returning student work (3.26), and checking and returning assessments promptly (3.30). Lower-rated items included maintaining lesson focus and organization (2.69) and consistent, objective grading regardless of work pressure (2.61). These observations offer a more precise starting point for faculty development than an undifferentiated recommendation to improve teaching. A large study using both teacher and student reports examined emotional exhaustion, classroom organization,

and student outcomes [21]. Its separate measures illustrate the kind of evidence needed to test relationships that this self-report survey can only suggest.

Classroom management averaged 2.93. Patience in responding to disruptions was rated 3.37, while responding to individual behavioral and participation needs was rated 2.67. A systematic review and meta-analysis addresses correlates of classroom management self-efficacy [4]; the descriptive pattern here cannot determine which skills or resources would close the local gap. Guided observation, mentoring, and specific feedback are plausible actions for evaluation, provided they are designed with instructors rather than inferred to be effective from these scores alone.

Student engagement was the lowest perceived efficacy domain (2.78). The study summary reproduces several classroom-management item descriptions under the student-engagement heading. That mismatch may reflect a transcription error, a questionnaire design error, or both. The domain mean is retained as printed, but item-level claims about student engagement should not be used until the administered form and scoring sheet are reconciled. Research on perceived competence, teaching practice, and student outcomes illustrate why self-reported efficacy and independently observed student participation should be kept distinct [11, 12].

Professional commitment averaged 3.24, higher than the other efficacy domains. The items for participation in institutional initiatives (3.53) and collaboration with colleagues (3.51) stand above the item for sustained active engagement in teaching and student support (2.57). A distinction between institutional participation and the daily demands of classroom service may help interpret this spread. The data do not indicate why the latter item was lower. Institutional recognition, manageable assignments, and time for collegial work are potential topics for local consultation; they are not effects demonstrated by this survey.

Interpersonal relations averaged 2.84. The highest item concerned informal conversations and collaborative activities with colleagues (3.04); effective response to students' emotional and academic needs was lower (2.57). Both ratings remain in the same interpretation band, but the item contrast matters for the design of support. Positive school leadership and principal support have been discussed in the literature as components of teacher well-being [6, 13]. Here, further interviews could clarify whether staff perceive enough time, guidance, and referral options to respond to students.

### 3.3 Rank agreement and reporting limitations

The rank-agreement analysis compared the item order assigned by the three program-size groups. Table 3 reports the two domains meeting  $p < .05$  under the printed  $\chi^2$  approximation. For the other nine domains, the reported  $W$  values range from 0.20 to 0.65, with  $\chi^2 p > .05$ . Agreement in rank order does not imply equal group means or an individual-level relationship between stress management and professional efficacy. Exact inferences depend on the original ranks and treatment of ties. These  $p$  values are unadjusted across 11 exploratory tests; neither of the two would meet a Bonferroni threshold of 0.05/11 (approximately 0.0045).

The source respondent description contains the inconsistent phrase "thirty-seven (39)"; the program counts total 39. The student-engagement item descriptions also repeat classroom-management wording. These discrepancies should be checked against the administered instrument and original responses.

Table 3. Rank concordance for the two domains with approximate  $p < .05$

| Ranked domain                          | Items | Kendall W | $\chi^2$ (df) | Approx. p |
|----------------------------------------|-------|-----------|---------------|-----------|
| Stress:<br>interpersonal<br>resilience | 6     | 0.82      | 12.30 (5)     | 0.031     |
| Efficacy:<br>classroom<br>management   | 7     | 0.85      | 15.30 (6)     | 0.018     |

Note: p values are  $\chi^2$  approximations from the printed statistics, without confirmed correction for ties. W describes agreement in item rank orders across three program-size groups; it does not test an individual-level stress–efficacy association.

### 3.4 Differences by instructional unit

The three program-size groups' descriptive efficacy scores appear in Table 4. The reported group averages are 2.99 for large, 3.06 for medium, and 2.86 for the small program. They describe the respondents in each category and should not be treated as a program-size effect. The small group has only three members, while unit discipline and resources also differ.

Table 4. Reported perceived professional efficacy means by program-size group

| Domain                      | Large (n=20) | Medium (n=16) | Small (n=3) |
|-----------------------------|--------------|---------------|-------------|
| Instructional effectiveness | 3.12         | 3.15          | 2.75        |
| Classroom management        | 3.10         | 3.08          | 2.62        |
| Student engagement          | 2.89         | 2.96          | 2.50        |
| Professional commitment     | 2.84         | 3.16          | 3.71        |
| Interpersonal relations     | 2.89         | 2.96          | 2.67        |
| Assessment and feedback     | 3.11         | 3.07          | 2.89        |
| Source group average        | 2.99         | 3.06          | 2.86        |

Professional commitment was 3.71 in the three-person small program, whereas its student engagement score was 2.50. One or two responses could materially shift either value. The original summary prints inconsistent group averages for stress management in its summary table and narrative, so those group comparisons are not reproduced here. Descriptive profiles should prompt questions about workloads and support, not claims that program size determined efficacy.

The practical reading of these profiles is exploratory. A conversation with instructors in each unit may reveal whether schedules, mentoring, assessment loads, and student support vary in ways that matter for the low-scoring domains. A follow-up design that includes repeated observations, documented workload, and student-facing measures would allow a stronger test of the interpretation. Longitudinal evidence also cautions that stress and burnout vary with organizational setting and time [14].

### 3.5 Implications for faculty development

Institution-wide action could begin with clear access to confidential support, predictable referral routes, and workload review. The survey identifies interpersonal resilience as the lowest stress management domain, while some questions about student support and feedback are relatively low within professional efficacy. Departments could use these patterns to set a small number of measurable priorities: for example, opportunities for peer case discussion, coaching on responsive classroom management, and scheduled time for formative feedback. The suggestions are policy options based on local descriptive findings; their feasibility and outcomes should be evaluated.

Related educational work offers examples for faculty development without testing stress management at MPCF. A guided inquiry study concerns scientific literacy and suggests an instructional approach that could inform discussion of student engagement [17]. Research on virtual exchange describes cross-cultural communication and collaboration activities in university settings [18]. A comparative digital-literacy policy analysis highlights curriculum integration, resources, and access as matters for institutional planning [19]. These papers address different populations and outcomes; none establishes that the activities improve stress management or professional efficacy in the present sample.

Program units may require different forms of support. A common orientation on wellness and professional boundaries can be paired with needs assessment in each department. Large programs may examine distribution of teaching and administrative duties; medium programs may examine what is working in their support routines; the small program may identify gaps in coverage and mentoring. These are questions to investigate, not assertions about the causes of the observed group means. Reviews suggest that teacher stress interventions and professional training can vary substantially in design and effects [2, 15].

Implementation should be evaluated with outcomes that are distinguishable from the original self-report items. For example, a faculty development pilot could document attendance, perceived acceptability, workloads, and later classroom or assessment observations using agreed criteria. Repeated measurement would help show whether domain scores change over time, while a comparison group or carefully designed rollout would make effect claims more defensible. A prior study reports changes in stress, burnout, and efficacy with technology-supported small-group instruction [16]; that result should be treated as contextual literature rather than as evidence that the same approach will work at MPCF.

### 3.6 Limitations and next steps

A single college and 39 respondents limit transfer to other maritime institutions. The stated total enumeration does not confer representativeness outside the institution. Cross-sectional reports from the same respondents in both questionnaire sections may share response bias; some outcome items themselves attribute teaching behavior to stress management. Consequently, the study cannot establish temporal order or a causal effect. Further, a section measuring “professional self-efficacy and accomplishment management” sits within stress management, increasing conceptual overlap between predictor and outcome.

The student-engagement summary repeats several classroom-management items; its exact six administered statements and scoring need to be reconciled with the questionnaire. Scale development remains incomplete without documented content review, missing-data treatment, item distributions, and internal consistency for each domain using a method suitable for five-category responses. The reported Kuder–Richardson calculation should not be taken as sufficient validation of the 80-item instrument.

Kendall’s W can be calculated from the printed sums of squared rank deviations, and the  $\chi^2$  approximation is broadly consistent with the reported W values. Yet the underlying ranks and treatment of tied positions were not available for an independent analysis. Approximate p values in Table 3 therefore support only a limited reading of group rank agreement; their precision and the substantive meaning of “group ranker” need confirmation. Replication should also collect separate stress and efficacy measures and, ideally, observations of instruction and repeated measurements.

### 4. Conclusion

In this survey of 39 MPCF instructors, the mean stress management rating was 3.28/5 and mean perceived professional efficacy was 2.97/5. Emotional regulation and professional role management received comparatively favorable ratings, whereas interpersonal resilience, student engagement, and interpersonal relations emerged as areas for closer institutional inquiry. Exploratory rank comparisons suggested agreement among program-size groups on some priorities, but those results depend on unverified source ranks and do not withstand adjustment for the number of comparisons. The findings can guide a locally tailored program combining faculty consultation, workload review, peer support, and targeted teaching development. Evaluation should use validated, distinct measures of stress management and instructional efficacy, repeated over time and supplemented where possible by classroom evidence. Because the data are cross-sectional and self-reported, they establish neither a causal effect of stress management on efficacy nor the effectiveness of a proposed intervention. The study’s contribution is a documented baseline for institutional planning and a clearer agenda for prospective evaluation.

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### Conflict of interests

The author declares no conflict of interest.

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