Research Article

Policy-To-Practice Gap in Occupational Mental Health Management For Indian Seafarers: A Critical Review of Regulatory and Organizational Interventions

Rashmi Sharma[1] , Dr. Anurag Shakya[2]

[1]Research Scholar, IBMC, Mangalayatan University, Aligarh.
[2]Professor, IBMC, Mangalayatan University, Aligarh.

Abstract

Psychological distress among Indian seafarers has drawn sustained scholarly and regulatory attention over the past decade, driven by evidence of elevated depression, anxiety, and post-traumatic stress symptoms, and by India's position as the nationality most frequently subject to seafarer abandonment worldwide. From a management perspective, this represents an occupational health governance problem spanning three organizational actors: the regulator (India's Directorate General of Shipping, or DG Shipping), employing shipping companies and crewing agencies, and international labour bodies such as the International Transport Workers' Federation (ITF). Each has taken visible steps since 2024, including amendments to the Merchant Shipping (Medical Examination) Rules and a 2025 DG Shipping-ITF collaboration on mental health training, but these interventions have not been examined together as a management system. This narrative-critical review pursues two objectives: first, to evaluate how far India's regulatory and organizational interventions engage with the documented forms and drivers of seafarer psychological stress; second, to identify specific implementation gaps across policy design, employer practice, and inter-agency coordination, and to propose managerial and policy recommendations for closing them. Two review propositions are examined: that the regulatory response references psychological fitness only in general terms without a named, validated instrument, an assigned organizational owner, or a published baseline (H1); and that current interventions, being pre-joining and examination-based, do not extend to post-abandonment psychological distress or place any corresponding obligation on employers and crewing agencies, despite India's disproportionate abandonment burden (H2). Both propositions are supported by the evidence reviewed. Recommendations span regulatory design, employer-level occupational health management, and independent policy evaluation.

Keywords: Indian seafarers; occupational mental health; seafarer psychological stress; seafarer abandonment; maritime policy; Merchant Shipping Rules; occupational health management.

1. Introduction

India supplies the second-largest share of the global seafaring workforce, with 311,936 Indian seafarers recorded in the 2026 BIMCO-International Chamber of Shipping (ICS) Seafarer Workforce Report, equivalent to 12.16% of the global total, and its seafarers form one of the largest occupational cohorts operating under conditions long associated with elevated psychological risk: prolonged family separation, confined living quarters, irregular sleep architecture from watch-keeping schedules, and, increasingly, exposure to wage theft and vessel abandonment. Over the past decade a growing body of peer-reviewed research has documented meaningful rates of depression, anxiety, and post-traumatic stress symptoms among multinational and Indian seafarer cohorts. In parallel, India has also emerged as the nationality most frequently left stranded aboard abandoned vessels, a status that has drawn direct comment from India's own maritime regulator.

These two strands of evidence, clinical prevalence data on the one hand and abandonment/welfare statistics on the other, have coincided with a period of regulatory activity. DG Shipping revised the Merchant Shipping (Medical Examination) Rules in 2024, circulated a further draft Merchant Shipping (Medical) Rules for consultation in 2026, and separately entered into a mental-health-focused collaboration with the ITF in 2025. This review asks a straightforward but underexamined question: how well does the resulting regulatory and policy framework correspond to what the evidence base says about the nature, scale, and drivers of psychological stress among Indian seafarers? Within the scope of the sources reviewed (detailed in Section 3), no prior published review was located that places the Indian regulatory response to seafarer mental health in direct, cross-referenced dialogue with the clinical and welfare literature summarized in Section 2; this review attempts to do so, while acknowledging that a broader search may locate work not captured here.

1.1 Objectives

This review pursues two objectives, framed as an occupational health management problem spanning regulatory, employer, and inter-agency levels:

Objective 1: To critically evaluate how far India's regulatory and organizational interventions for seafarer welfare engage with the psychological stress evidence base on Indian seafarers.

Objective 2: To identify implementation gaps between current interventions and the evidence base, and to propose managerial and policy recommendations for closing them.

1.2 Hypotheses

As a narrative-critical review rather than an empirical study, this paper does not test statistical hypotheses; instead, each hypothesis below is paired with the objective it tests, and both are evaluated qualitatively against the documentary and clinical evidence assembled in Sections 2, 4, and 5.

H1 (testing Objective 1): India's regulatory and organizational engagement with seafarer psychological stress remains general rather than operational, lacking a named screening instrument, an assigned organizational owner, and a published baseline.

H2 (testing Objective 2): The resulting implementation gap is concentrated beyond the pre-joining stage, in post-abandonment psychological distress and employer/crewing-agency accountability, which current interventions do not reach.

2. Review of Literature

This section synthesizes the sources drawn upon in this review, organized into three strands: clinical and occupational health literature on seafarer psychological stress; regulatory and policy literature governing seafarer medical fitness in India; and welfare/abandonment literature documenting the structural conditions under which that stress occurs. All sources discussed here are listed in the References section; no source appears in this review that is not cited.

2.1 Clinical and Occupational Health Literature on Seafarer Psychological Stress

Pawar and Rathod (2007), publishing in the Medical Journal Armed Forces India, remain the most detailed Indian dataset to disaggregate occupational stress by seniority and posting. Drawing on a sample of 5,077 Indian Naval personnel using the Occupational Stress Inventory, they found high occupational stress in 66.5% of personnel serving afloat, compared with 51.6% ashore and 53.7% on submarines, and reported that social support reduced stress for officers and senior sailors but not for junior sailors. Although this study predates the review's general 2020 cut-off and concerns naval rather than merchant seafarers, it is retained because no more recent Indian dataset offers comparable rank-based disaggregation.

Sharma (2024), in the International Journal of Public Health Excellence, surveyed 109 Indian merchant seafarers in 2023 using the DASS-21 and the Oldenburg Burnout Inventory (OLBI). The study reported mild depression (M = 13.54), moderate anxiety (M = 10.81), and stress within the normal range (M = 13.28), alongside moderate burnout on both the disengagement and exhaustion subscales of the OLBI. This is the only source in the review drawn from a confirmed all-Indian merchant seafarer sample, and it anchors the review's claim that psychological distress among Indian seafarers is measurable but not uniformly severe across all domains.

Baygi et al. (2021), in BMC Psychiatry, and a related paper by Baygi et al. (2022) in BMC Public Health, report on the same underlying survey of 439 seafarers from two international oil-tanker shipping companies during the COVID-19 pandemic. The 2021 paper found depression in 12.3% of respondents, anxiety in 11.6%, and general psychiatric disorder (via the GHQ-12) in 42.6%. The 2022 companion paper, using the GAD-7, PHQ-9, and PTSD-8 instruments, found anxiety symptoms in 12.4%, depressive symptoms in 14.1%, and post-traumatic stress symptoms in 37.3% of the same cohort. Both papers describe the cohort as multinational; this review could not confirm from the published abstracts that the sample was majority-Indian, and treats these two papers as relevant comparative evidence on tanker-crew psychological distress rather than as India-specific data.

Table 1 consolidates the quantitative findings of these four sources.

Study	Sample	Key Finding(s)
Pawar & Rathod (2007), Medical Journal Armed Forces India	n = 5,077 Indian Naval personnel	High occupational stress in 66.5% serving afloat vs. 51.6% ashore and 53.7% on submarines; social support

Study	Sample	Key Finding(s)
		buffered stress for officers/senior sailors but not junior sailors
Sharma (2024), International Journal of Public Health Excellence	n = 109 Indian merchant seafarers, surveyed 2023	Mild depression (M = 13.54), moderate anxiety (M = 10.81), normal-range stress (M = 13.28); moderate burnout on both OLBI subscales
Baygi et al. (2021), BMC Psychiatry	n = 439 multinational tanker crew (nationality mix not confirmed as majority-Indian in this review)	Depression 12.3%, anxiety 11.6%, general psychiatric disorder (GHQ-12) 42.6%
Baygi et al. (2022), BMC Public Health	Same underlying survey population, n = 439	Anxiety symptoms (GAD-7) 12.4%, depressive symptoms (PHQ-9) 14.1%, PTSD symptoms (PTSD-8) 37.3%

Table 1. Principal clinical/quantitative sources on Indian or majority-Indian seafarer psychological stress, 2007-2024. [Source: Pawar & Rathod (2007); Sharma (2024); and Baygi et al. (2021, 2022).]

Read together, these four sources point to a consistent pattern: measurable, non-trivial rates of psychological distress that are neither at population-crisis levels in every domain (stress itself was in the "normal" range in the Sharma cohort) nor negligible (general psychiatric disorder above 40% in the Baygi cohort; PTSD symptoms above a third). The Pawar and Rathod findings, though the oldest in this review, remain the only Indian dataset to disaggregate stress by seniority, and all four sources converge on family separation, workload, and lack of onboard privacy as recurring correlates of distress.

2.2 Regulatory and Policy Literature

The primary regulatory literature reviewed comprises three documents issued or circulated by India's maritime administration: the Merchant Shipping (Medical Examination) Rules, 2000 (Directorate General of Shipping, 2000), which established the foundational pre-sea and periodic medical certification framework; the Merchant Shipping (Medical Examination) Amendment Rules, 2024 (Directorate General of Shipping, 2024), which revised examiner-approval and refresher-training procedures; and the draft Merchant Shipping (Medical) Rules, 2026 (Ministry of Ports, Shipping and Waterways, 2026), circulated for public consultation and containing the review's only located reference to "psychological demands" as a fitness-examination criterion. These three documents are read and critically discussed in full in Section 4.

2.3 Welfare and Abandonment Literature

The structural/welfare literature reviewed consists of data releases from the International Transport Workers' Federation (ITF): its 2024 report on 2023 abandonment figures, its 2024 report describing 2024 as the worst year on record for abandonment, its 2026 report on the 2025 abandonment crisis, and its two 2025 releases describing the DG Shipping-ITF mental health training collaboration and the suicide-compensation commitment respectively. Additionally, an ANI (2026) news report of the BIMCO-International Chamber of Shipping Seafarer Workforce Report 2026 is used to establish the scale of the Indian seafaring workforce (311,936 seafarers, 12.16% of the global total).

Figure 1 summarizes the abandonment data drawn from the ITF sources.

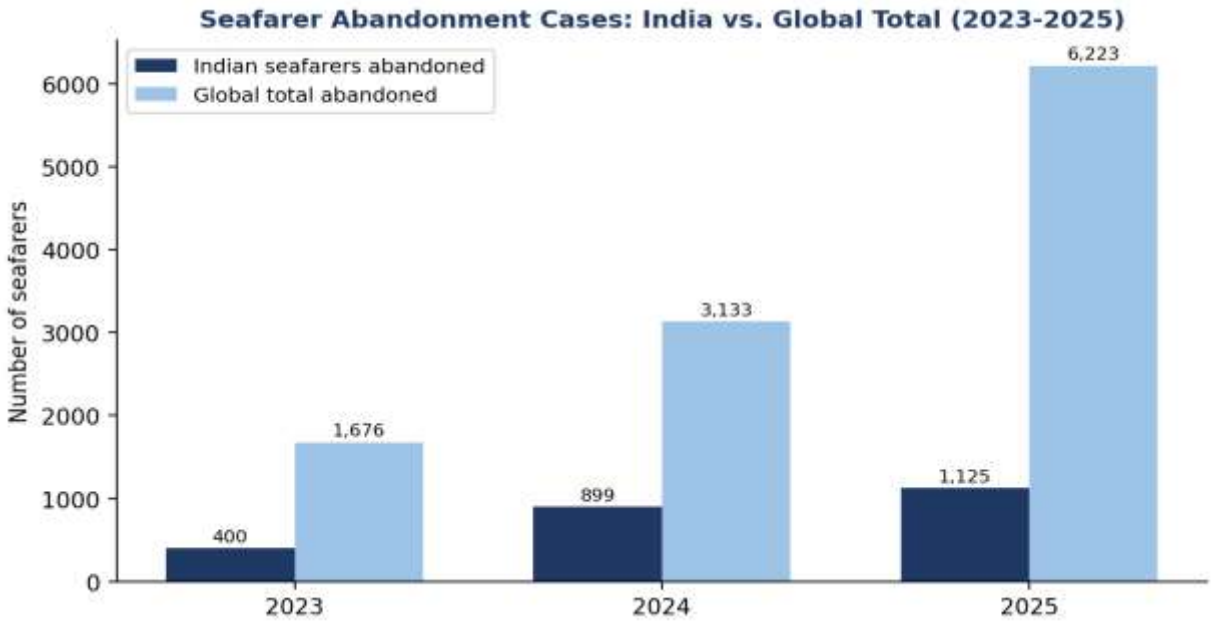

Figure 1. Indian seafarer abandonment cases against the global total, 2023-2025.

[Source: Chart created by the author using data from International Transport Workers' Federation, annual abandonment data releases (2024, 2026).]

India was the single most-abandoned nationality in each year for which data is available: over 400 of 1,676 global cases in 2023; 899 of 3,133 in 2024; and 1,125 of 6,223 cases across 410 ships in 2025. This structural stressor is not addressed by fitness-oriented medical examination at all, a point developed further in Section 5.

3. Methodology

This is a narrative-critical review rather than a systematic review, reflecting both the heterogeneity of the source material (peer-reviewed clinical studies, international labour-body reports, and primary legal/regulatory instruments) and the comparative, policy-analytic aim of the exercise, which is not well served by a strict PRISMA-style synthesis of effect sizes. Sources were identified through targeted searches of PubMed/PMC, Google Scholar, and the official repositories of DG Shipping, the ITF, and the BIMCO-International Chamber of Shipping (ICS) joint manpower survey, using combinations of the terms "seafarer," "Indian," "mental health," "stress," "abandonment," and "Merchant Shipping Rules." Sources were restricted, where possible, to material published or amended between 2020 and 2026, with two exceptions retained for historical context: the 2007 Indian Navy occupational-stress study, which remains the most detailed Indian dataset on rank-based stress disparity, and the foundational 2000 Merchant Shipping (Medical Examination) Rules, which the 2024 amendment builds upon. Primary legal instruments were read directly from DG Shipping's own gazette notifications rather than secondary summaries wherever a copy could be located.

4. Regulatory Background

India's seafarer medical-fitness regime rests on the Merchant Shipping (Medical Examination) Rules, 2000, issued under Section 98(3) of the Merchant Shipping Act, 1958 (since replaced by the Merchant Shipping Act, 2025). The 2000 Rules establish the framework for pre-sea and periodic medical certification, approved-examiner standards, and certificate validity periods, but their original text is oriented overwhelmingly toward physical fitness: vision and hearing standards, infectious-disease screening, and cardiovascular risk. DG Shipping's own Merchant Shipping (Medical Examination) Amendment Rules, 2024 revise the examiner-approval and refresher-training procedure for Medical Examiners of Seafarers, add a definition of transgender persons to the Rules, and repeal the corresponding 2016 amendment. Notably, the 2024 amendment text located for this review contains no explicit reference to psychological, psychiatric, or mental-health assessment; its revisions are procedural and definitional rather than

substantive on this point. A further draft Merchant Shipping (Medical) Rules was circulated for public consultation in 2026, indicating that the regulatory instrument remains under active revision.

Separately from the Medical Examination Rules, DG Shipping entered a bilateral collaboration with the ITF in January 2025, under which mental-health and stress-management content is to be incorporated into India's national maritime training curriculum, with maritime faculty receiving specialized instruction to deliver it. At a subsequent stakeholder event in April 2025, DG Shipping additionally committed to ensuring that seafarer-death compensation, payable under Merchant Shipping Notices 7 of 2020 and 2022, would explicitly cover suicide. Both the Director-General's public remarks and the ITF's own reporting frame these steps as a direct response to increased incidence of depression, anxiety, and suicide among Indian seafarers, alongside the country's abandonment burden.

On the medical-examination side specifically, the 2026 draft Merchant Shipping (Medical) Rules, circulated by the Ministry of Ports, Shipping and Waterways for public consultation, instructs the medical examiner to take into account the physical and psychological demands of the seafarer's intended shipboard position. This is the clearest psychologically worded provision confirmed directly from a primary Ministry/DG Shipping text located during this review; it does not, in the text available, name a specific validated screening instrument, specify a scoring threshold, or describe a disclosure or confidentiality protocol. This gap between a general instruction to consider psychological demands and an operationalised, evidence-based screening protocol forms a central finding of Section 5.

5. Critical Analysis: Where Policy Diverges from Evidence

5.1 Instrument and Baseline Gap

None of the public DG Shipping communications reviewed specify which, if any, validated psychological screening instrument (for example the DASS-21, GHQ-12, or PHQ-9 used in the academic literature summarized in Table 1) is to be used in any expanded medical examination. Without a named, validated instrument and a published baseline prevalence figure for the seafaring population as a whole, it will not be possible to evaluate whether any future screening intervention has changed outcomes, since there is no pre-intervention measurement to compare against.

5.2 The Abandonment Blind Spot

The Medical Examination Rules and their amendments are concerned with fitness to join a vessel; they have no mechanism that engages with a seafarer's psychological state after abandonment has occurred, nor with the wage-related financial distress that the literature increasingly treats as a distinct stress pathway. The DG Shipping-ITF collaboration addresses this partially through pre-emptive training rather than through a curative or monitoring mechanism for seafarers who are already stranded.

5.3 Disclosure and Stigma Risk

Even the confirmed, narrower provision, an instruction to weigh "psychological demands" during fitness examination, carries a disclosure-and-stigma risk that the available regulatory text does not appear to address. Any psychological fitness assessment conducted at the pre-joining or hiring stage creates an incentive for under-reporting, since a seafarer has reason to fear that a negative assessment could affect employability. The peer-reviewed literature on seafarer mental health (both the Indian and multinational studies reviewed in Table 1) consistently identifies stigma and fear of being "signed off" as a barrier to honest self-report. Absent a published confidentiality framework separating psychological assessment from employment decisions, a hiring-stage psychological criterion risks discouraging exactly the disclosure it may be intended to elicit.

5.4 Operational Transparency Gap

Beyond the single phrase confirmed in Section 4, this review could not locate any further primary-text detail (an appendix, scoring rubric, or named instrument) operationalising the 'psychological demands' provision, despite an extensive search of DG Shipping's own gazette notifications and consultation drafts. A regulator introducing a psychologically-relevant fitness criterion without an accompanying, publicly retrievable operational protocol leaves both examiners and researchers unable to determine what is actually being assessed or how consistently.

5.5 Absence of Independent Evaluation

No published study identified in this review evaluates the effect of the 2024 amendment or the ITF collaboration on any seafarer mental health outcome, which is unsurprising given how recently these measures were introduced, but it means that as of this writing the policy response is evidence-informed in its stated motivation but not yet evidence-tested in its effect.

6. Discussion

The overall picture is one of a regulator that has, within a short window, moved from an almost entirely physical-fitness-oriented medical examination regime to one that at least rhetorically acknowledges psychological stress as a legitimate occupational health concern for Indian seafarers, a genuine and comparatively rapid shift by regulatory standards. What has not yet followed is the infrastructure that would let anyone, including DG Shipping itself, know whether the intervention works: a named instrument, a published baseline, a confidentiality framework consistent with encouraging honest disclosure, and a commitment to independent evaluation. The abandonment literature further suggests that medical-examination-based interventions, however well designed, cannot on their own address a stress pathway that originates in wage theft and employer non-compliance rather than in any individual seafarer's psychological resilience.

7. Recommendations

The recommendations below are organized by the management level at which each gap identified in Section 5 can realistically be closed: regulatory design, employer/crewing-agency practice, and independent system-level evaluation. This reflects the review's framing of seafarer psychological stress as an occupational health governance problem rather than a matter for regulatory text alone.

7.1 Regulatory-Level Recommendations

Recommendation	Rationale
Publish the amended Medical Examination Rules text and any psychometric protocol in full, indexed and retrievable from DG Shipping's own site	Closes the verification gap identified in Section 5.4; enables independent academic and civil-society scrutiny
Name a specific validated instrument (e.g., DASS-21, GHQ-12, or PHQ-9) and publish an aggregate, de-identified baseline prevalence figure	Enables pre/post evaluation of any future screening intervention, addressing the gap in Section 5.1

Table 2. Regulatory-level recommendations arising from the policy-to-practice gap analysis.

[Source: Original analysis by the author; not derived from an external dataset.]

7.2 Employer and Crewing-Agency Level Recommendations

Recommendation	Rationale
Require shipping companies and crewing agencies to route any psychological assessment through an independent, confidential occupational-health channel, separate from the hiring decision-maker	Reduces the disincentive to honest self-report identified in Section 5.3, and places accountability for confidentiality on the employer as well as the regulator
Extend employer-level welfare obligations to cover post-abandonment psychological support (for example, through mandatory welfare-fund contributions or P&I Club-backed support lines), not only pre-joining screening and pre-emptive training	Addresses the structural gap identified in Section 5.2; assigns organizational ownership of abandonment-related distress, which regulatory text alone does not currently do

Recommendation	Rationale
Incorporate mental-health-management competency into crewing-agency and manning-office accreditation criteria, not only into seafarer-facing training curricula	Extends the DG Shipping-ITF training initiative from an individual-seafarer intervention into an organizational-capability requirement

Table 3. Employer and crewing-agency level recommendations arising from the policy-to-practice gap analysis. [Source: Original analysis by the author; not derived from an external dataset.]

7.3 System-Level and Evaluative Recommendations

Recommendation	Rationale
Commission an independent, time-bound evaluation of the ITF-DG Shipping curriculum initiative and the amended examination rules within 3-5 years of implementation, with employer-level compliance as a measured outcome	Converts an evidence-informed policy into an evidence-tested management system, addressing Section 5.5
Establish a joint regulator-employer-union review mechanism to track abandonment-linked psychological distress cases as a distinct occupational health category	Creates inter-agency coordination that neither the Medical Examination Rules nor the ITF collaboration currently provide on their own

Table 4. System-level and evaluative recommendations arising from the policy-to-practice gap analysis. [Source: Original analysis by the author; not derived from an external dataset.]

8. Limitations

This review is narrative rather than systematic, and its regulatory-text analysis is limited by the public retrievability of DG Shipping's own notifications, several of which exist only as scanned PDFs of varying completeness or as consultation drafts not yet in force. Where a specific operational detail (such as a named psychometric instrument) could not be confirmed from a primary source, this review has deliberately reported the absence of evidence rather than inferring a specific mechanism. The clinical evidence base itself remains thin for the Indian merchant marine specifically: only one of the studies in Table 1 (Sharma, 2024) is drawn from a confirmed all-Indian merchant seafarer sample; the Baygi et al. studies are multinational, and the Pawar and Rathod data are naval rather than merchant.

9. Conclusion

Behind the statistics in this review are more than 311,936 Indian seafarers currently at sea, and the families who wait for them onshore. When over a third of a comparable multinational tanker crew report post-traumatic stress symptoms, and when India loses more of its seafarers to abandonment than any other nation on earth (1,125 in 2025 alone, out of 6,223 worldwide), the question of how the country protects its seafarers' mental health is not an abstract policy debate but a matter of real, avoidable harm to a workforce that keeps global trade moving and sustains hundreds of thousands of Indian households. This review has shown that India's regulatory response, while genuine and comparatively fast-moving since 2023, has so far taken the form of general acknowledgement rather than an operating system: no publicly named screening instrument, no published baseline against which progress can be measured, and no mechanism that reaches a seafarer once he or she has already been abandoned. For the public, and for the seafarers and families this issue concerns most directly, the practical significance is straightforward: a policy that names psychological stress but does not build the instruments, accountability, and post-abandonment support to act on it will not, by itself, reduce the incidence of depression, anxiety, or suicide documented in the literature reviewed here. Closing that gap through published instruments, baseline data, confidentiality safeguards, employer-level accountability, an abandonment-inclusive mandate, and independent

evaluation would convert a genuinely well-intentioned policy gesture into a measurable improvement in the daily lives of India's seafaring workforce.

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