

## Mental Health of Maritime Cadets in the Digital Era: An Instagram Netnographic Study in the Context of the 2026 STCW Amendment

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### ABSTRACT

This study aims to analyse the mental health needs and patterns of psychosocial support among maritime cadets in the digital era, particularly in anticipation of the 2026 amendment to the Standards of Training, Certification and Watchkeeping (STCW). A qualitative Netnographic approach was employed to analyse public Instagram content related to maritime cadets. Data were collected from 20 digital postings and processed using NVivo thematic coding analysis. The findings indicate that the dominant narrative within the digital ecosystem of maritime cadets is “appreciation and positive support,” representing 70% of all coded narratives. Notably, 68.6% of these supportive narratives originate from general internet users, suggesting that emotional validation is largely derived from public digital audiences. In contrast, narratives coded under “struggle” account for only 1.3% of total mentions, indicating possible impression management in social media environments. Digital support functions as a proxy protective factor against psychological pressure. However, the dominance of image-based validation may create a gap between public perception and actual psychological experiences. This study contributes to maritime mental health literature by positioning digital social support as a critical mediating variable and recommends that maritime institutions integrate authentic mental health support programs in preparation for upcoming STCW standards.

**Keywords:** *Maritime Cadets, Mental Health, Digital Social Support, Netnography, STCW Amendment, Impression Management, Maritime Education*

### ABSTRAK

Penelitian ini bertujuan untuk menganalisis kebutuhan kesehatan mental dan pola dukungan psikososial *Maritime Cadet* dalam konteks digital, mengantisipasi peningkatan tuntutan profesional akibat Amandemen STCW 2026. Desain penelitian kualitatif digunakan dengan pendekatan Netnography pada konten publik Instagram, didukung oleh analisis 20 database unggahan postingan Instagram dan data *output* kuantitatif kualitatif dari Matriks Kode NVivo. Sampel penelitian meliputi narasi digital yang terkait dengan *Maritime Cadet*, difokuskan pada koding 5: apresiasi & dukungan positif dan koding 7: perjuangan, dengan metode analisis tematik. Hasil penelitian menunjukkan bahwa narasi Apresiasi dan Dukungan Positif Tema 5 adalah fenomena yang paling dominan, mencakup 70.0% dari total narasi yang terkodekan. Secara signifikan, 68.6% dari seluruh narasi Dukungan Positif tersebut berasal dari sumber internet user, membuktikan bahwa dukungan emosional bagi *cadet* sebagian besar bersumber dari validasi citra publik digital. Kontrasnya, narasi yang mengkodekan Perjuangan Tema 7 sangat minim, hanya mencakup 1.3% dari total narasi yang terkodekan, mengindikasikan adanya *impression management* di media sosial. Dukungan digital yang dominan berfungsi sebagai faktor pelindung proksi terhadap

tekanan psikologis, namun pola dukungan yang berfokus pada citra ini berpotensi menciptakan kesenjangan antara realitas dan persepsi publik. Penelitian ini berkontribusi pada kerangka teoretis kesehatan maritim dengan memvalidasi *digital social support* sebagai variabel kritis dan mendesak institusi maritim untuk mengintegrasikan program dukungan mental yang otentik dalam menghadapi standar STCW yang akan datang.

**Kata kunci:** *Maritime Cadet*, Kesehatan Mental, Dukungan Digital, Netnography, Amandemen BST-STCW

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## 1. INTRODUCTION

Maritime cadets represent a critical transitional phase in the development of future seafarers who will support the global maritime industry. The maritime profession has long been associated with demanding working conditions, including isolation, hierarchical organizational structures, and high operational responsibility. Previous studies have consistently reported that maritime personnel experience higher risks of stress, depression, and psychological fatigue compared to many other professional groups (Brooks & Greenberg, 2022). These psychological pressures often originate during the early stages of professional formation, particularly during maritime education and training.

Within maritime academies, cadets undergo rigorous academic and disciplinary regimes designed to prepare them for operational responsibilities at sea. Although such institutional structures aim to produce highly competent maritime professionals, they may simultaneously generate psychological pressure and emotional challenges. Several studies have highlighted that maritime students and cadets frequently encounter stress related to academic workload, strict institutional discipline, and uncertainty regarding future career demands (Alday & Paet, 2025).

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Despite this growing concern, the mental health experiences of maritime cadets remain relatively underexplored in the academic literature, particularly in relation to their digital social environments (Prati, 2024).

The urgency of addressing cadet mental health is further amplified by the anticipated 2026 amendment to the Standards of Training, Certification and Watchkeeping (STCW) Convention, which is expected to introduce higher competency standards, particularly in areas related to digital literacy, technological adaptation, and resource management (Kim et al., 2023). While these regulatory developments aim to strengthen maritime safety and operational efficiency, they may also increase academic pressure and psychological expectations among cadets preparing to enter the maritime workforce.

Simultaneously, contemporary cadets live in an increasingly digitalized social environment. Social media platforms—particularly Instagram—have become important spaces where individuals construct professional identity, express emotional experiences, and seek social validation. Digital interactions may function as informal psychosocial support systems, especially for individuals operating within highly structured institutional environments. Previous studies suggest that digital social networks can influence perceptions of social support, belonging, and emotional well-being (Caba Machado et al., 2023; Wegmann et al., 2023).

However, existing research on maritime mental health has largely focused on professional seafarers, shipboard working conditions, or occupational health risks, while limited attention has been given to maritime cadets and their digital social environments. Furthermore, few studies have explored how online narratives reflect psychosocial dynamics among maritime cadets, particularly in relation to professional identity formation and perceived social support.

To address this research gap, this study employs a netnographic approach to analyze Instagram-based digital narratives related to maritime cadets. By examining themes of appreciation, support, and struggle expressed within online discourse, the study aims to identify patterns of digital social support and psychosocial representation among cadets. The findings are expected to contribute to the growing body of literature on maritime mental health while offering insights into the role of digital environments in shaping cadets' psychological experiences in the context of the upcoming STCW regulatory changes.

## 2. METHODS

This The netnographic procedure applied in this study follows a structured analytical framework adapted from Kozinets (2015). The process consists of five iterative stages designed to ensure methodological rigor, transparency, and systematic interpretation of digital ethnographic data (Kozinets, 2015). The method is particularly suitable for examining naturally occurring digital narratives without formal institutional intervention.

The methodological framework of this study is visually summarized in **Figure 1**, highlighting the iterative and systematic nature of the netnographic process applied in the analysis.



**Figure 1. Five Stages of Netnographic Design**

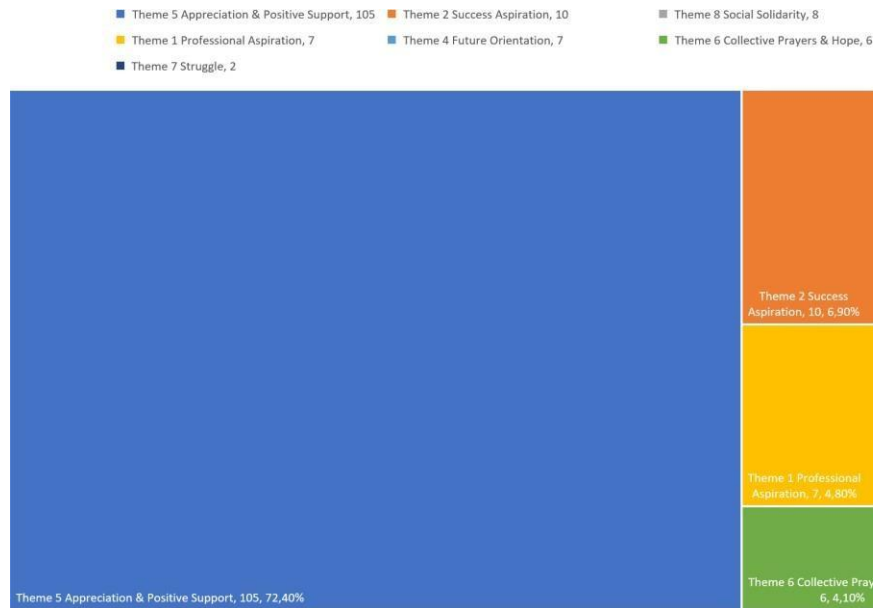
- a. Stage 1 Define Research Questions. The first stage involved defining the research objectives and formulating guiding research questions related to the representation of mental health, support narratives, and psychosocial expressions among maritime cadets in digital environments. This stage also included identifying the relevance of social media as a data source and determining Instagram as the primary research platform due to its popularity among maritime cadets and its visual–narrative communication structure.
- b. Stage 2 Identify Online Communities. In the second stage, relevant digital communities and online spaces were identified. Instagram accounts, hashtags, and publicly available posts associated with maritime cadets were explored using keywords such as “maritime cadet,” “taruna,” “maritime academy,” and “seafarer education.” Only publicly accessible content was considered in order to maintain ethical research standards and respect user privacy.

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- c. Stage 3 Data Collection & Observation. The third stage involved systematic data collection from the identified digital environment. A purposive sampling strategy was applied to select posts that contained narratives related to maritime training experiences, professional identity, emotional expression, or social interaction surrounding maritime cadets. A total of 20 Instagram posts consisting of captions, comments, images, and short videos were extracted and archived for analysis.
  - d. Stage 4 Thematic Analysis & Interpretation. The collected data were analyzed using NVivo qualitative analysis software. Thematic coding followed the reflexive thematic analysis framework proposed by Braun and Clarke (2024). The analysis included several steps: data familiarization, generation of initial codes, clustering of related codes into thematic nodes, and interpretation of thematic relationships. Coding results were organized into multiple narrative themes, with particular emphasis on two key dimensions: Theme 5 (Appreciation & Positive Support) representing digital social support, and Theme 7 (Struggle) representing expressions of psychological pressure.
  - e. Stage 5 Report Findings. The final stage involved interpreting the thematic patterns within the broader theoretical context of digital social support, impression management, and maritime mental health. The findings were then integrated with existing literature to explain how digital narratives may function both as sources of emotional reinforcement and as potential mechanisms of image construction within online environments.

### 3. RESULT AND DISCUSSION

#### 3.1 Dominance of Digital Support Narratives

The findings indicate that the most dominant theme within the digital ecosystem of maritime cadets is “**Appreciation and Positive Support**”, with 105 coded mentions. This represents approximately 70% of all identified narratives. To provide a clearer visual representation of the overall thematic distribution, the coding results are summarized in **Figure 2** below:



**Figure 2. Distribution of Thematic Coding Across All Narratives**

Figure 2 summarizes the NVivo Matrix Coding Query output by visualizing the frequency of coded mentions across the study's qualitative coding scheme (5 nodes; 18 narrative themes). The treemap is dominated by Theme 5 (Appreciation & Positive Support) with 105 mentions, represented by the largest block area.

Substantially lower frequencies are recorded for secondary themes: Theme 2 (Success Aspiration) with 10 mentions and Theme 8 (Social Solidarity) with 8 mentions. Two themes show identical mid-range frequencies, namely Theme 1 (Professional Aspiration) and Theme 4 (Future Orientation) with 7 mentions each, followed by Theme 6 (Collective Prayers & Hope) with 6 mentions. The least frequent category is Theme 7 (Struggle) with 2 mentions, represented as the smallest block. In the themes displayed in Figure 2 ( $n = 145$  total mentions across the listed themes), Theme 5 accounts for 72.4%, with the remaining shares distributed across Theme 2 (6.9%), Theme 8 (5.5%), Theme 1 (4.8%), Theme 4 (4.8%), Theme 6 (4.1%), and Theme 7 (1.4%). As an additional frequency descriptor from the Matrix Coding Query, Internet Users contributed 72 of the 105 mentions within Theme 5, while the remaining 33 mentions were attributed to other coded stakeholder sources in the dataset.

The treemap highlights the proportional dominance of each identified theme, allowing a direct comparison of narrative emphasis across categories.

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The visual composition immediately reveals the overwhelming prevalence of “Appreciation and Positive Support” relative to other themes, thereby reinforcing the central finding of this study.

Of these 105 mentions, 72 (68.6%) originated from general internet users, demonstrating that public digital audiences play a central role in shaping supportive discourse surrounding maritime cadets.

These supportive narratives primarily emphasized:

- a. professional image,
- b. discipline,
- c. symbolic prestige of uniform,
- d. admiration and motivational encouragement.

This suggests that digital social support functions as an external validation mechanism, reinforcing cadets’ professional identity in highly structured educational environments.

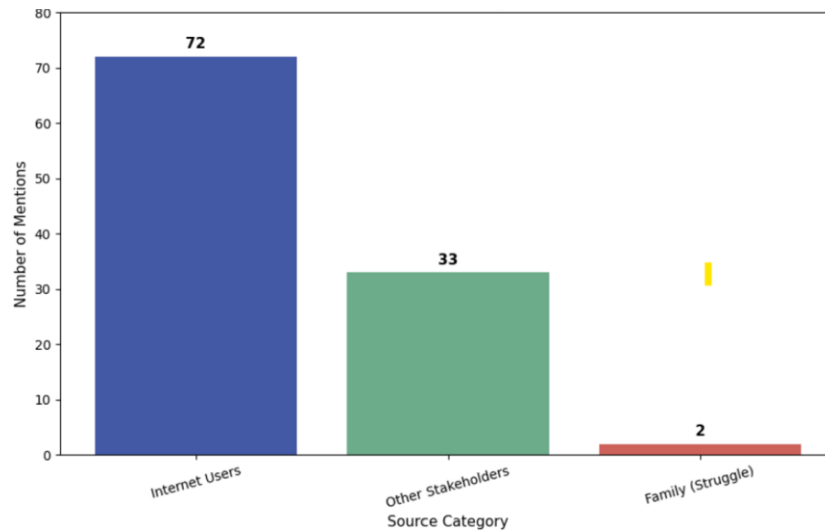
### **3.2. Limited Narratives of Struggle**

In contrast, Theme 7 (“Struggle”) recorded only **2 mentions**, both originating from family members. No explicit expressions of struggle were found from active cadets or internet users.

This minimal frequency does not indicate the absence of stress. Instead, it suggests the presence of **impression management**, where negative experiences are underrepresented in public digital spaces.

The imbalance between dominant positive narratives and minimal struggle narratives reveals a potential discrepancy between public image and private psychological experience.

### 3.3. Digital Support as a Proxy Protective Factor



**Figure 3. Source Distribution**

Figure 3 presents the distribution of narrative sources contributing to the digital discourse surrounding maritime cadets. The data demonstrate that Internet Users constitute the most dominant source category, contributing 72 mentions within Theme 5 (Appreciation & Positive Support). Other stakeholders collectively account for 33 mentions, while expressions categorized under Theme 7 (Struggle) are limited to only 2 mentions and originate exclusively from family members.

The strong predominance of supportive narratives generated by public digital audiences indicates that digital social support may function as a proxy protective factor against psychological pressure. Public validation can enhance self-esteem and provide motivational reinforcement, particularly in anticipation of increasing academic and professional demands associated with the 2026 STCW amendment. However, the asymmetrical distribution of narrative sources also suggests a structural vulnerability. When validation is predominantly image-based and externally driven, over-reliance on public affirmation may create psychological dependency. Cadets who encounter real-world failure, stress, or institutional pressure that cannot be publicly displayed may experience dissonance between their digital identity and private emotional realities.

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Therefore, digital support simultaneously acts as:

- a. a resilience enhancer, and
- b. a potential source of psychological dependency when external validation substitutes for internal coping mechanisms.

### **3.4. Implications for STCW 2026 Readiness**

The anticipated STCW 2026 amendment is expected to increase technical and professional standards. While digital support may strengthen motivation and resilience, the lack of authentic discussion about struggle may hinder the development of internal coping mechanisms.

True psychological readiness requires not only public validation but also safe spaces for vulnerability, reflection, and stress management.

## **4. CONCLUSION**

This netnographic study concludes that digital narratives surrounding maritime cadets are overwhelmingly dominated by appreciation and positive support, primarily generated by general internet users. These findings position digital social support as a critical environmental factor influencing cadets' psychological well-being. The minimal representation of struggle narratives suggests the presence of impression management in social media environments, potentially masking underlying psychological pressures.

In the context of the anticipated STCW 2026 amendment, which is likely to increase academic and professional demands, maritime institutions must recognize digital social support as both a protective resource and a potential vulnerability.

This study contributes to maritime mental health research by:

- a. Expanding theoretical frameworks to include digital social support as a mediating variable.
- b. Demonstrating the methodological value of netnography in maritime education research.
- c. Highlighting the specific psychosocial dynamics of maritime cadets, a population underrepresented in previous literature.

Future research should integrate mixed-method approaches, including direct psychological assessment and institutional data, to better understand the relationship between digital validation and actual mental health outcomes. Maritime

institutions are encouraged to develop structured mental health programs that complement digital support with confidential, authentic, and professionally guided psychosocial services.

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