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Emotional Competence in Maritime leaders

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"The most effective leaders share a critical characteristic: a high level of emotional intelligence. While IQ and technical expertise remain important, they primarily serve as baseline qualifications for executive roles."

David Goleman

Abstract-- The merchant navy offers a compelling career path for young professionals, providing substantial financial rewards, opportunities for adventure, and international experience. Nevertheless, the profession also involves considerable challenges, such as extended working hours, periods of isolation, and restricted access to recreational activities. The maritime industry operates within a multicultural environment. Managing vessel crews is both time-intensive and costly, with mixed cultural teams frequently serving on board. A key responsibility for senior-ranking seafarers in this sector is personnel management. Their interpersonal skills play a role in creating a positive working atmosphere, and multicultural crews may present additional challenges. Leadership approaches have evolved, shifting from autocratic to more democratic styles. Effective personnel management can enhance onboard performance, support the selection process, and contribute to retaining skilled employees. Addressing complex personnel issues requires leaders to demonstrate empathy, a central aspect of Emotional Intelligence (EI).

Keywords-- Competency, Emotional Intelligence, Leadership, Seafarers, Well-being

I. INTRODUCTION

Emotions play a pivotal role in shaping our identities and influencing decision-making processes. Decision quality is often enhanced by an individual's emotional well-being, contributing to professional competence and self-assurance. The integration of emotional awareness with domain expertise promotes improved outcomes and imbues work and life with greater purpose. Emotional competence encompasses the ability to perceive, articulate, and regulate emotions effectively.

In maritime settings, factors such as social isolation, prolonged absences from home, operational risks, and diverse crew compositions can intensify emotional challenges. Senior-ranking seafarers are regularly tasked with conflict resolution, providing psychological support, and fostering morale and cooperation onboard. Their capacity to manage personal emotions and respond appropriately to the emotional needs of others has a direct impact on team cohesion and safety standards.

Research indicates that leaders exhibiting advanced emotional competence are better equipped to cultivate trust, resilience, and adaptability within their teams, which subsequently reduces the likelihood of errors and enhances overall vessel performance.

Emotional competence in this context comprises several key components: emotional awareness (the recognition of one's own emotions and those of others), emotional expression (the appropriate communication of feelings), emotional regulation (the management of emotional responses), and empathetic engagement. These competencies, particularly for senior ranking seafarers, are developed through structured training, mentorship, and reflective practice rather than being inherent traits. Incorporating emotional competence into maritime leadership development programs has been associated with improved communication, decreased occupational stress, and a reduction in mental health concerns—such as anxiety and depression—among both supervisors and crew members.

A report entitled "Human Error in Merchant Marine Safety" published by Margetts in 1976 by the National Academy of Sciences (NAS) and the Maritime Transportation Research Board (MTRB) found that 27% of surveyed participants identified emotional instability within crews as a significant factor contributing to maritime incidents and near-miss events. These findings underscore the critical impact of emotional dynamics on human error and operational safety in the merchant navy.

II. PURPOSE OF THE STUDY

- To assess emotional competence in senior ranking seafarers.
- To understand the role of age, rank, and years of sailing on their emotional competence.
- To assess correlation between four components of emotional competence in senior ranking seafarers.

III. REVIEW OF LITERATURE

The maritime work environment is particularly demanding, operating within a rigid hierarchical structure and a closed system that can intensify stress levels. In such conditions, emotional intelligence is essential for managing motions, maintaining effective interpersonal relationships, and coping with high-pressure situations.

Emotional intelligence significantly influences leadership effectiveness by integrating emotions into decision-making and interpersonal relationships as examined by Goleman, 1995; Salovey & Mayer, 1989–90.

Emotional intelligence encompasses the capacity not only to regulate one's own emotions but also to influence the moods and emotional states of others. The ability to inspire enthusiasm or prompt caution in individuals is a significant interpersonal skill and serves as a key mechanism for social influence (Wasielowski, 1985).

According to research done by Roberts (1998) and Hansen (2002), fatality rates in merchant navy are 20 times the average of shore-based industries in that particular industry. Thus, a seafarer working on a merchant board or cargo vessel is always at risk in some way or the other. This profession is demanding in many ways and it's not a profession where a person can switch off from work and relax or distress in a different environment that generally happens in other professions. Seafarers must be both physically and mentally strong in order to cope with daily risks on board. Physical and mental health of seafarers is also important to prevent accidents and hazards.

Research by Matthews et al. (2006) highlights that individuals respond to stress and workplace challenges differently, with emotional intelligence playing a key role in these variations. Their findings suggest that individuals with lower emotional intelligence are more prone to worry and tend to rely on avoidance-based coping strategies when faced with stress.

Research conducted by Nurahaju and Widanti (2014) highlights the significant impact of emotional intelligence on individual behavior and communication. Their study shows that seafarers often experience elevated stress levels, particularly when feeling overwhelmed, working in confined spaces, or worrying about their families left behind.

These stressors emphasize the critical role of emotional intelligence in managing emotions and maintaining effective communication in the maritime environment. Thus, family is also an important part of stress in the life of seafarers.

If a person has high EQ or emotional intelligence or EQ, they are likely to fare better and can cope with stress in a better way as compared to seafarers who do not possess the emotional stability to deal with stress in a better way.

Seafarers have an ever-going evolving need for adaptation. They have to keep adapting themselves to new environment in order to work effectively. Every new voyage means that seafarers must adapt to new people, new situations. This adaptation is possible if a person has a satisfactory level of emotional intelligence. There have been numerous studies that aim at understanding the significance of emotional intelligence with respect to job performance. One such study has shown that high emotional intelligence is linked to high performance in seafarers. (Kiliç, K., & Tavacioglu, L. (2015).

When leaders are aware of and regulate their emotions, they can incorporate this awareness into their decision-making processes. Emotions may serve as indicators that help direct attention toward immediate concerns amid various demands (Easterbrook, 1959; Frigda, 1988; Mandler, 1975; Simon, 1982). The relationship between emotions and their causes can provide useful information for prioritizing these demands. If emotions arising from less urgent issues interfere with more critical matters, the capacity to manage these emotions—an aspect of emotional intelligence—may contribute to more effective decisions.

Additionally, emotions can offer information regarding potential problems and opportunities (Schwarz & Clore, 1996). Leaders who accurately perceive their emotions and understand their origins can determine whether emotions correspond to opportunities, problems, or specific actions, and use this information during decision making. Recognizing when an emotion is irrelevant also enables leaders to mitigate its influence and reduce the risk of errors. Emotional intelligence, therefore, involves both the effective use of emotions in decision making and the management of emotions that might impede this process. Greater emotional awareness and regulation may also allow leaders to approach challenges flexibly, consider alternative scenarios, and minimize rigid thinking during decision making.

IV. METHODOLOGY

A training session was conducted for 70 maritime leaders which was attended by Senior seafarers from the same company. Purposive sampling was done on multicultural seafarers using quantitative and qualitative data.

Officers who are emotionally stable, mentally resilient, and capable of identifying psychological distress in themselves and others are more likely to develop strong leadership skills and contribute effectively to a safe working environment.

V. TOOL USED FOR THE STUDY:

Quick Emotional Intelligence developed by Paul Mohapel (2015) was used in the present research. The Quick Emotional Intelligence Self-Assessment, adapted from Paul Mohapel's model, focuses on four key areas: Emotional Awareness, Emotional Management, Social Emotional Awareness, and Relationship Management.

It is a 40-item questionnaire that assesses these areas using a 0-4 Likert scale, where 0 is "Never" and 4 is "Always". The range score was 0-24 (low), 25-34 (medium), and 35-40 (high) respectively. Paul Mohapel's model emphasizes the practical application of emotional intelligence, encouraging individuals to reflect on their strengths and areas for growth through the self-assessment and free-form questions. This tool helps individuals identify their EQ strengths and areas for potential improvement. The emotional intelligence questionnaire from Paul Mohapel (2015) was ready made, and it was reliable since the Cronbach alpha score is 0.76.

Area	Description
Emotional Awareness	Demonstrated capacity to recognise and assess one's own emotions, as well as their influence on cognitive processes and behaviour.
Emotional Management	Managing your emotions effectively, including regulating your responses and adapting to different situations
Social Emotional Awareness	Capacity to understand the emotions of others and how they perceive you
Relationship Management	Ability to build and maintain healthy relationships by effectively managing your own emotions and understanding those of others

VI. PURPOSE OF THE STUDY

- To assess emotional competence in senior maritime leaders.
- To understand influence of age, rank, and years of sailing on emotional competence.

- To assess correlation between four components of emotional competence in senior maritime leaders.

VII. RESULTS

Let us see how variables interacted in the study, we started with one way ANOVA to compare four competencies as shown below.

Table 1:
One-way Anova for Emotional Competencies in Seafarers

Summary of Data					
	<i>Treatments</i>				
	EA	EM	SA	RM	Total
N	70	70	70	70	280
$\sum X$	1843	2041	2089	2046	8019
Mean	26.3286	29.1571	29.8429	29.2286	28.639
$\sum X^2$	49401	61061	63683	62054	236199
Std.Dev.	3.566	4.7415	4.4089	5.7134	4.8418
Result Details					
<i>Source</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	F = 7.91687*	
Between-treatments	518.239	3	172.746		
Within-treatments	6022.33	276	21.82		
Total	6540.57	279			

*The result is significant at $p < .05$.

After assessing correlation with independent variables, an attempt was made to see if there is a statistically significant differences among the means of emotional competencies in the given sample and for that one-way ANOVA was used as shown in table 1.

Significant F value as shown above indicates four competencies have a real and statistically meaningful effect on each other in the sample population. Next, we applied Post Hoc Tukey test to determine pairs of means and their significant differences if any as shown below.

Table 2:
Post Hoc Tukey HSD (beta) for emotional competencies

<i>Pairwise Comparisons</i>		HSD _{.05} = 2.0409 HSD _{.01} = 2.4808	Q _{.05} = 3.6554 Q _{.01} = 4.4434
T₁:T₂	EA = 26.33 EM = 29.16	2.83	Q = 5.07 (p = .00226)**
T₁:T₃	EA = 26.33 SA = 29.84	3.51	Q = 6.29 (p = .00007) **
T₁:T₄	EA = 26.33 RM = 29.23	2.90	Q = 5.19 (p = .00163) **
T₂:T₃	EM = 29.16 SA = 29.84	0.69	Q = 1.23 (p = .82108)
T₂:T₄	EM = 29.16 RM = 29.23	0.07	Q = 0.13 (p = .99973)
T₃:T₄	SA = 29.84 RM = 29.23	0.61	Q = 1.10 (p = .86438)

****The p-value is .000044. The result is significant at $p < .05$.**

In Table 2, we analysed the result after one way ANOVA on Post hoc Tukey HSD. In the above table, we noticed statistical difference in three pairs of group means. One is emotional awareness-emotional management; second is emotional awareness-social awareness.

Third is emotional awareness and relationship management, respectively.

After observing differences in group means, we explored correlation of four competencies to deeper our understanding of their influence on each other as follows.

Table 3:
Correlation of Emotional competencies in seafarers

Pearson's Correlation	EA	EM	SA	RM
Emotional Awareness	0	0.29*	0.39*	0.49*
Emotional Management		0	0.48*	0.55*
Social Emotional Awareness			0	0.41*
Relationship Management				0

***The result is significant at $p < .05$.**

Table 3 shows Pearson correlation between variables. This was done to assess the strength and direction of the relationship used in the present research. It was observed there was a positive correlation between emotional awareness, emotional management, social awareness, and relationship management. Emotional awareness explains knowing about our emotions and their triggers while emotional management refers to controlling reactions.

Social awareness is an ability to know when to express emotions. All the above-mentioned competencies enhance relationships, enabling effective communication, empathy, and conflict resolution.

By mastering these aspects of emotional intelligence, individuals can build trust, foster positive interactions, and strengthen connections in all areas of life.

Table 4:
Correlation between Independent Variables and Emotional Competency

Pearson's Correlation	EA	EM	SA	RM
Age	0.00	-0.09	-0.34	-0.12
Rank	0.06	-0.10	-0.10	-0.12
Years of Sailing experience	0.00	-0.05	-0.25	-0.10

** The result is significant at $p < .05$.*

In Table 4, we have attempted to see how independently variables are affecting emotional competencies in the sample population. Correlation shows negative correlation between age and years of experience in social awareness. The same was noticed in rank and emotional awareness.

The unique occupational demands on senior officers—such as captains and chief engineers—require a high degree of self-awareness, empathy, and interpersonal skill.

As can be seen below in Figure 1, most of the participants were in the age bracket of 30-39 years ($n=32$, 46%) followed by 40-49 years ($n=20$, 29%), 50-59 years ($n=14$, 20%) 60-60 years ($n=3$, 4%) and lastly, 70-79 years ($n=1$, 1%) with a mean average age of 44 years and SD of 9.2 respectively.

VIII. DISCUSSION:

Maritime leaders are responsible not only for navigational and technical operations but also for the management of multinational crews in highly dynamic and often stressful environments.

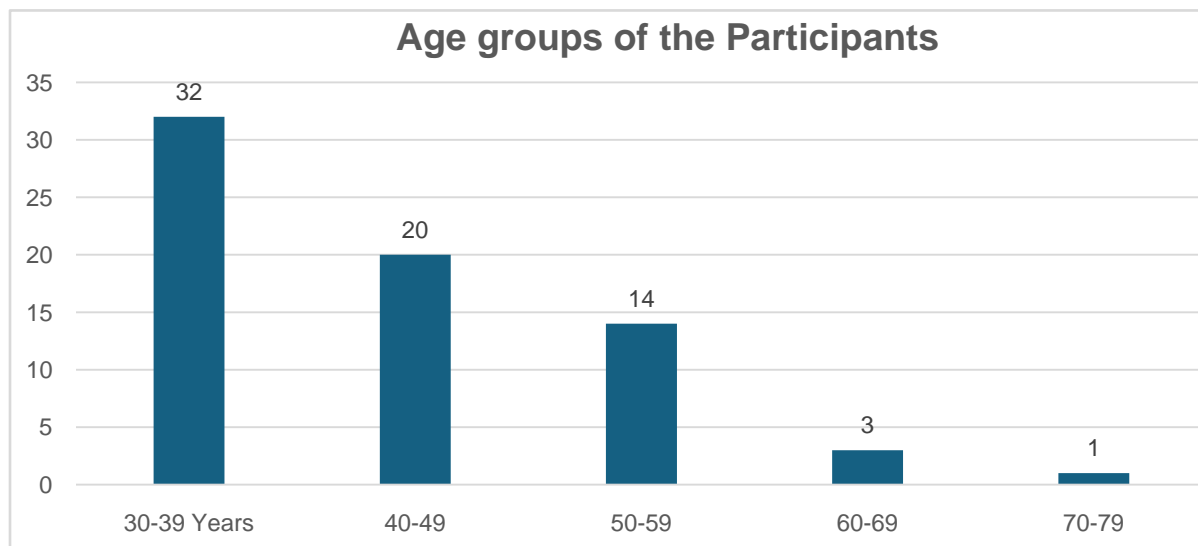


Figure1: Age group of the Participants

The above graph shows that there were mostly middle-aged officers and engineers who were attending the conference. We enquired about participants rank to understand which all rank leaders were attending the conference.

Figure 2 shows Second engineers (n=19, 27%) and Chief engineer (n=18, 26%) followed by chief officer (n=17, 24%) and Captain (n=16, 23%). This explains that our sample group has 37 engineers and 33 deck officers attending the conference.

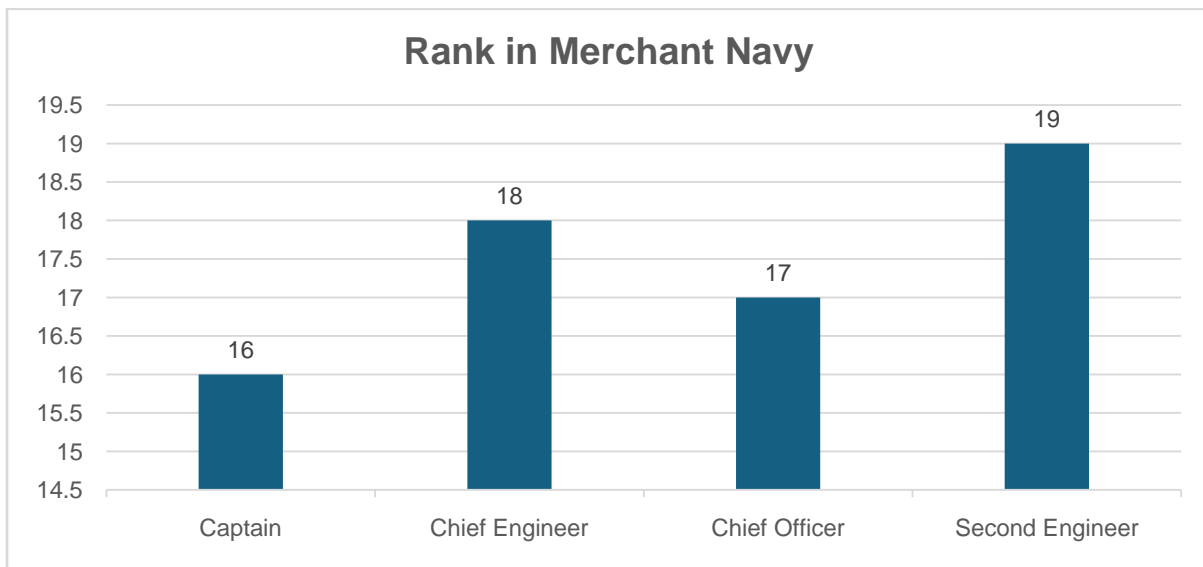


Figure2: Rank of the Participants

Next independent variable that was assessed were participants years of sailing. Figure 3 shows maximum participants post being in the position of seniority were falling in the age group of 9-18 years (n=40, 57%), followed by 19-28 years (n=21, 30%), 29-38 years (n=6,

9%) and the least from the 39-48 years (n=2, 3%) and 49-58 years (n=1, 1%) respectively. This confirms youngsters leaders in age and years of sailing experience as top four ranks on the ships.

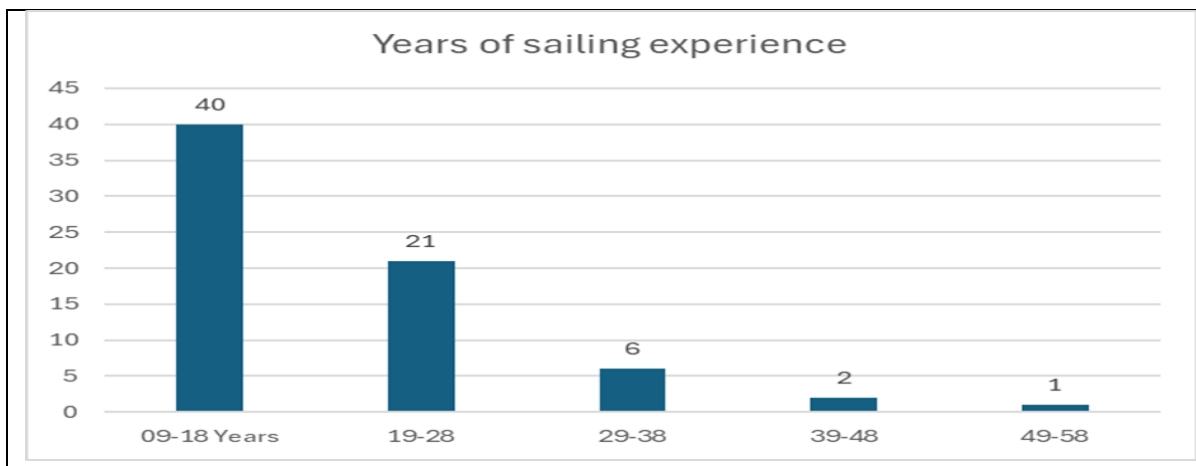


Figure 3: Years of sailing as leaders

When we assessed Emotional competency in the sample group, we observed that amongst four components, participants scored effective in all four components. Figure 4 shows that emotional awareness needing more attention (n=22,31%), social emotional awareness most effective (n=55, 79%) and relationship management most enhanced (n=11, 16%) respectively. This indicates that they need deeper understanding on emotional awareness. This is their ability to understand their own emotions and how it impacts their thoughts and actions.

Interestingly, their social emotional awareness is effective which indicates their capacity to understand the emotions of others and how they perceive them. Lastly, as their skill on social relations are strong, Figure 4 shows a similar trend between their social and relationship management which is enhanced. This is their ability to build and maintain healthy relationships by effectively managing their own emotions and understanding those of others.

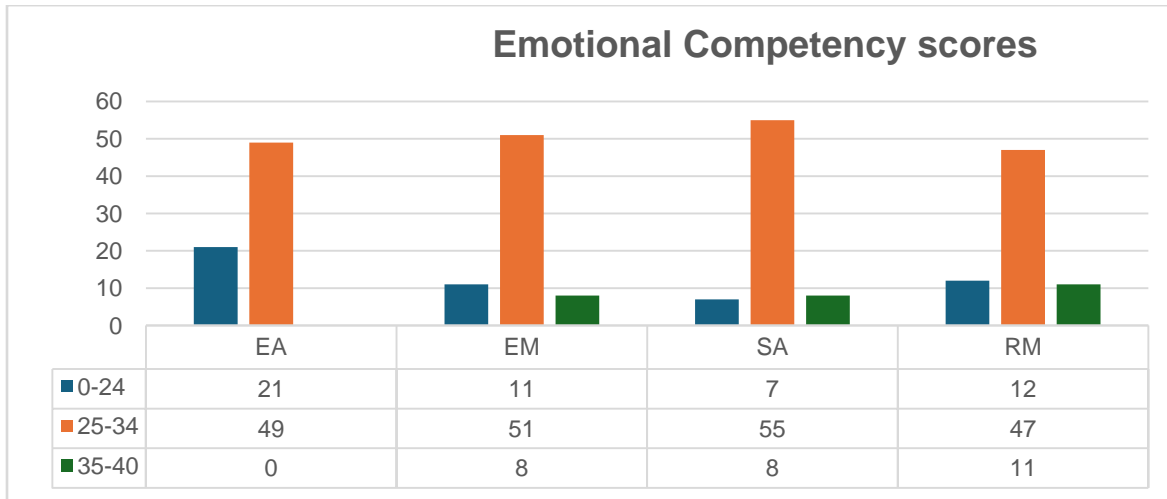


Figure 4: Emotional Competency scores in Participants

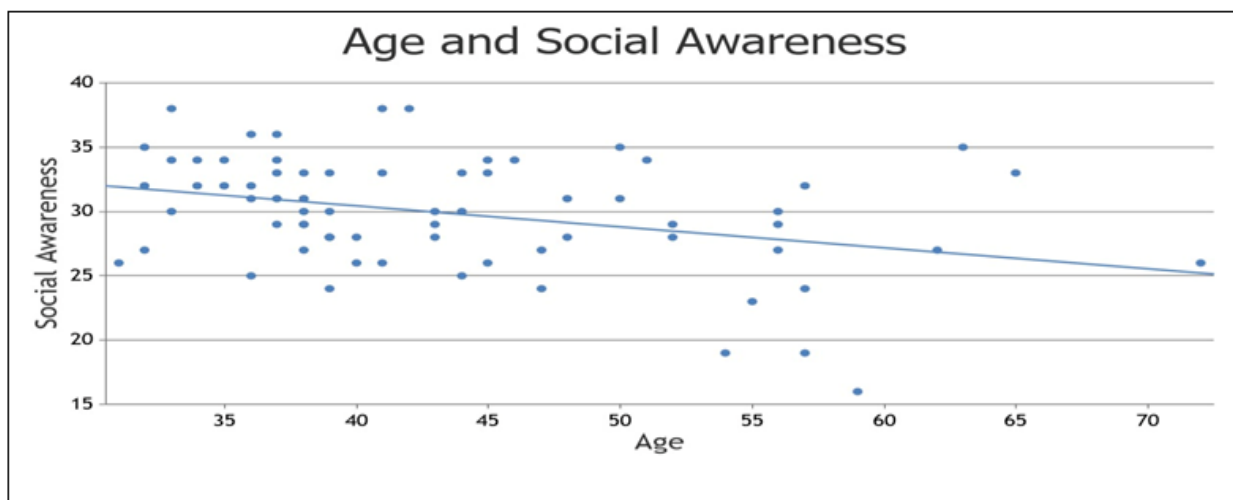


Figure 5: Age and Social Awareness

As shown in Table 4, Age and social awareness show a negative correlation ($r = -0.34$) which indicates that younger the seafarer higher their social awareness as shown in figure 5.

Social awareness, a core component of emotional intelligence (EQ), is the ability to understand and empathize with others' emotions, perspectives, and needs by recognizing and interpreting social and emotional cues. It involves active listening, observing nonverbal cues like body language and tone, and taking others' viewpoints into

account to foster better communication, teamwork, and more inclusive, respectful interactions in both personal and professional settings. In the present study, younger the participant, higher was their social awareness. This supports findings by Johnsen et. al (2012) who concluded that Chief Officers/Second engineers seem to be more open towards feelings and to regulate feelings in the self as well as in others. By doing so, it can help to increase personal understanding and growth. A link could be made between managing emotions and managing people.

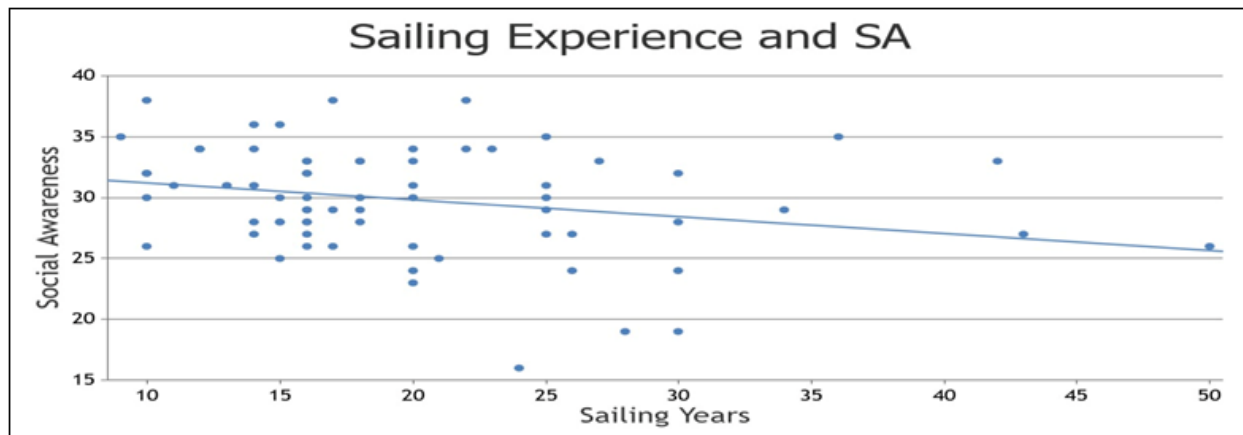


Figure 6: Years of Sailing and social awareness

As shown in Table 4, present study showed a negative correlation between sailing experience and social awareness ($r = -0.25$). As shown in Figure 6, participants who has less than 30 years of sailing experience showed higher social awareness.

This finding is contradictory to the research findings by Uniyal et.al (2020) who examined the length of service playing a significant role in shaping social awareness. Their findings indicate that the ability to sense the feelings of others was seen primarily in case of people with 20 to 30 years of experience and it was significantly higher than the ones with lesser or more years of experience.

Present findings support Uniyal et.al (2020) findings that people between 15 to 35 years of experience can easily identify the power centre in the organization that other experience groups.

Research studies on social awareness in seafarers highlight its importance for their overall well-being, highlighting challenges like social isolation, cultural differences, and the lack of proper communication on multicultural crews.

Studies reveal that a lack of social support, inadequate training, and poor work-life balance negatively impact seafarers, increasing stress, anxiety, and depression.

IX. FUTURE RECOMMENDATIONS

- Comparison between age, gender and cultural aspects can be considered.
- A larger sample size can be considered.

X. CONCLUSION

In conclusion, emotional competence is not simply an advantageous attribute for senior-ranking seafarers; it constitutes a fundamental competency underpinning effective leadership, safety, and well-being at sea. Although technical proficiency remains essential for operational performance, soft skills—including emotional intelligence, decision-making, and problem-solving—are equally indispensable.

This study identifies emotional competence among senior-ranking seafarers as comprising self-awareness, self-management, social awareness, and relationship management, all of which are critical for meeting the challenges inherent in the demanding, isolated, and multicultural maritime environment. These capabilities, grounded in emotional intelligence, facilitate improved communication, contribute to the development of resilient and inclusive teams, support conflict management, and promote both safety and operational excellence. Furthermore, they are vital for adapting to evolving circumstances, safeguarding mental health, and providing effective leadership to multicultural crews under high-pressure conditions. Consequently, the cultivation and evaluation of emotional competence should be thoroughly integrated into the professional training and ongoing support provided to maritime officers.

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Author Contributions

Authors have contributed to the conception and design and was in charge of the data analysis.

Conflict of Interest statement

None declared.

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Ethical/consent Statement

All the participants took informed consent. They were informed about the study's purpose, and how their data would be used. Throughout the study participants' anonymity and confidentiality has been protected and the data is handled and stored securely.

REFERENCES

- [1] Easterbrook, J.A. The effects of emotion on cue utilization and the organization of behavior. *Psychological Review*, 1959, 66, 183–200.
- [2] Frigda, N.H. The laws of emotion. *American Psychologist*, 1988, 43, 349–58.
- [3] George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human relations*, 53(8), 1027–1055.
- [4] Goleman, D. Emotional intelligence. New York: Bantam Books, 1995
- [5] Hansen, H. L., Nielsen, D., & Frydenberg, M. 2002. Occupational accidents aboard merchant ships. *Occupational and environmental medicine*, 59(2), pp. 85–91.
- [6] Johnsen BH, Meeus P, Meling J, Rogde T, Eid J, Eisepevik R, Olsen OK, Sommerfelt-Pettersen J. Cultural differences in emotional intelligence among top officers on board merchant ships. *Int Marit Health*. 2012;63(2):90–5. PMID: 22972548.
- [7] Kiliç, K., & Tavacioglu, L. (2015). Influence Of Emotional Intelligence On The Work Performance Of Seafarers. *Annals (Constanta Maritime University)*, 16(24).
- [8] Mandler, G. Mind and emotion. New York: Wiley, 1975.
- [9] Margetts, B. D. (1976). Human error in merchant marine safety. The National Research Council, Washington DC.
- [10] Matthews, G., Emo, A. K., Funke, G., Zeidner, M., Roberts, R. D., Costa, P. T., & Schulze, R.
- [11] (2006). Emotional intelligence, personality, and task-induced stress. *Journal of Experimental*
- [12] *Psychology: Applied*, 12(2), 96–107. <https://doi.org/10.1037/1076-898X.12.2.96>
- [13] National Maritime Research Center. (1976). Human error in merchant marine safety (Report No.CG-D-75-76). U.S. Coast Guard. <https://maritimesafetyinnovationlab.org/wpcontent/>
- [14] uploads/2021/04/MTRB-Human-Error-in-Merchant-Marine-Safety-June-1976.pdf
- [15] Nurahaju, R., & Widanti, N. S. (2014). Coping Stress among the Seafarers: How Does Emotional Intelligence Give Effects. *Sidang Penyunting*, 79.
- [16] Roberts, S. 1998. Occupational Mortality among Merchant Seafarers in the British, Singapore, and Hong Kong Fleets. Seafarers International Research Centre (SIRC), Cardiff University.
- [17] Roberts, S. E., & Hansen, H. L. (2002). An analysis of the causes of mortality among seafarers in the British merchant fleet (1986–1995) and recommendations for their reduction. *Occupational medicine*, 52(4), 195–202.
- [18] Salovey, P. & Mayer, J.D. Emotional intelligence. *Imagination, Cognition, and Personality*, 1989–90, 9, 185–211.
- [19] Schwarz, N., & Clore, G. L. (1996). Feelings and phenomenal experiences. *Social psychology: Handbook of basic principles*, 2, 385–407.
- [20] Seema Hrishikesh Pundale, Dr. Namrata Kamble. (2025). Integrating Emotional Intelligence Training in Pre-Sea Programs: Enhancing Competency and Resilience of Merchant Navy Cadets. *Southeastern European Journal of Public Health*, 128–138. <https://doi.org/10.70135/seejph.vi.5022>
- [21] Simon, H.A. Comments. In M.S. Clark and S.T. Fiske (Eds), *Affect and cognition*. Hillsdale, NJ: Erlbaum, 1982, pp. 333–42.
- [22] Uniyal, S., & Uniyal, A. (2020). Impact of work experience on emotional intelligence at workplace. *International journal of advanced research*, 8(01), 668–674.
- [23] Wasielewski, P.L. The emotional basis of charisma. *Symbolic Interactionism*, 1985, 8, 207–22.