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Understanding the Core Values of Seafarers: A Study Based on Schwartz's Value Theory

Jeric Bacasdoon^{1,2*}, Johan Bolmsten¹, Inga Bartuseviciene¹

¹ World Maritime University, Fiskehammsgatan 1, 211 18 Malmö, Sweden, e-mail: w1013703@wmu.se

² Maritime Academy of Asia and the Pacific, Kamaya Point, Brgy. Alas-asin, Mariveles, Bataan, Philippines

* Corresponding author

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ABSTRACT

Values of seafarers influence the safety of maritime operations and determining them helps in understanding seafarers' behavior and decision-making. This empirical study investigated the predominant personal values among seafarers using Schwartz's Value Theory as the theoretical framework. Employing a quantitative approach, this study surveyed 1002 seafarers using a revision of the Schwartz Revised Portrait Value Questionnaire (PVQ-RR). The revised version (in English) was tested for validity and reliability and was pilot tested, then translated into eight other languages. Quantitative analysis involved statistical analyses which followed the recommendations of Schwartz (2021) to determine the values that seafarers hold, including their significant differences based on demographic profiles. The findings reveal that the predominant values among seafarers are Self-transcendence and Conservation, specifically Security, Benevolence, Universalism and Conformity broad values. Universalism-Nature, Security-Personal, Benevolence-Caring, Security-Societal, Benevolence-Dependability and Universalism-Concern were the narrowly defined values that seafarers hold. Also, there was no significant difference in the values that seafarers hold in terms of their demographic profile except for their nationality. To the knowledge of the researchers, this is the first study that used the 19 value-framework to determine the value priorities of seafarers. The determined values of seafarers are significant to maritime stakeholders, including the Maritime Education and Training institutions in designing/redesigning programs to address the affective domain of learning, specifically values and their internalization.

1 Introduction

The maritime industry contributes much to the growth and movement of the global economy. Driving these contributions are the seafarers who face the challenging and isolating nature of life at sea. Because of this, seafarers must embody certain values, in addition to their technical knowledge and skills, that help them survive and thrive. These values not only affect the well-being of the seafarers but also exert much influence on the safety and efficiency of maritime operations.

In order for maritime operations to be performed effectively and efficiently, seafarers need to be equipped

with not only the required cognitive knowledge and psychomotor skills but also affective dispositions. While a number of studies show that educational institutions catering to different fields and disciplines put more emphasis on the cognitive aspect, then psychomotor, and less on the affective side, if addressed at all [1-4], Verplanken and Holland found that values affect how a person behaves when cognitively activated [5]. In previous research works in the maritime sector, values like safety, cooperation, and environmental responsibility have been stressed [6-7]. However, identification and understanding of the values that need to be emphasized to ensure the optimal performance of seafarers need further exploration.

The purpose of this study is to identify and define the key values that seafarers hold, based on Schwartz’s Value Theory. In Schwartz’s framework, human values are categorized into a universal system that can be used to shed light on different behavioral trends, linking values to behavior and choices in diverse fields and cultures [8-12]. By using the framework in the context of seafaring, this research seeks to provide a comprehensive view of the values deemed necessary for effective, safe, and sustainable operations on board ships.

With Schwartz’s Value Theory as the theoretical framework, this research seeks to explore the predominant values among seafarers, and compare these value preferences according to their demographic profiles such as age, gender, nationality, rank, and sea experience. The findings of this study will lead to potential im-

plications of identified value gaps which are highly relevant to maritime stakeholders. Specifically for Maritime Education and Training (MET) institutions, the findings can be used to design/redesign MET programs to properly address the affective domain, specifically values and their internalization.

Schwartz’s Value Theory and Basic Human Values

Values play a multifaceted role in human experience, acting as fundamental principles that shape perceptions of what is good and desirable [13]. Moreover, they serve as significant motivators for behavior, judgments and decision-making [13-15] and attitudes [16].

Building on the research of Rokeach [14], the Schwartz [13] value theory categorizes values into ten

Table 1 The Four Higher Order Values, 10 Basic Values, and 19 more narrowly defined Values in the Refined Theory of Values (Schwartz and Cleciuch, 2021), adapted from Schwartz (1992, 2017), and Schwartz et al. (2012)

Four higher order values	10 original values	19 more narrowly defined values
1. Self-transcendence	1. Benevolence: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact 2. Universalism: Understanding, appreciation, tolerance, and protection for the welfare of <i>all</i> people and of nature	1. Benevolence-Dependability: Being a reliable and trustworthy member of the in-group 2. Benevolence-Caring: Devotion to the welfare of in-group members 3. Universalism-Tolerance: Acceptance and understanding of those who are different from oneself 4. Universalism-Concern: Commitment to equality, justice, and protection for all people 5. Universalism-Nature: Preservation of the natural environment 6. Humility^a: Recognizing one’s insignificance in the larger scheme of things
2. Conservation	3. Conformity: The restraint of actions, inclinations, and impulses that are likely to upset or harm others and violate social expectations or norms 4. Tradition: Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provides 5. Security: Safety, harmony, and stability of society, relationships, and self	7. Conformity-Interpersonal: Avoidance of upsetting or harming other people 8. Conformity-Rules: Compliance with rules, laws, and formal obligations 9. Tradition: Maintaining and preserving cultural, family, or religious traditions 10. Security-Societal: Safety and stability in the wider society 11. Security-Personal: Safety in one’s immediate environment 12. Face^a: Security and power through maintaining one’s public image and avoiding humiliation
3. Self-enhancement	6. Power: Control or dominance over people and resources 7. Achievement: Personal success through demonstrating competence according to social standards 8. Hedonism: Pleasure and sensuous gratification for oneself	13. Power-Resources: Power through control of material and social resources 14. Power-Dominance: Power through exercising control over people 15. Achievement: Retained definition 16. Hedonism^a: Retained definition
4. Openness to change	9. Stimulation: Excitement, novelty, and challenge in life 10. Self-Direction: Independent thought and action, choosing, creating, and exploring	17. Stimulation: Retained definition 18. Self-Direction-Action: The freedom to determine one’s own actions 19. Self-Direction-Thought: The freedom to cultivate one’s own ideas and abilities

Note: ^a Humility is located between the higher order conservation and self-transcendence values. Hedonism is located between the higher order openness to change and self-enhancement values. Face is located between the higher order self-enhancement and conservation values.

broad types. Later on, it was refined but expanded to 19 values, as presented in Table 1 with their definitions [17-18]. Schwartz's value theory has been extensively tested across a range of cultures in over 80 countries, providing empirical support for the universality of the framework [19]. While individuals in different cultures may have different preferences for specific values, Schwartz's structure is found to apply universally.

Schwartz posited that values are transcendental because they are typically not confined to a specific situation but are broad and general ideas that can be applied across different circumstances [17]. Moreover, values are organized into a system as they are structured hierarchically and interact with each other. They are not isolated or random but interconnected in a complex manner. The greater the importance of a value, the more an individual is driven to follow it as a guiding principle [14,20]. Schwartz demonstrated that values are interrelated in a way that can be represented as a two-dimensional circular structure [21]. One of the key dimensions is *Openness to Change*, which includes values like self-direction and stimulation, which emphasize freedom, creativity, and autonomy against *Conservation*, which includes values like security, tradition, and conformity,

which focus on stability, order, and preservation of the status quo. The other dimension is *Self-Enhancement vs Self-Transcendence*. Self-Enhancement focuses on personal success and the pursuit of power, including values like achievement and power while Self-Transcendence includes values like benevolence and universalism, focusing on the welfare of others and society as a whole. This two-dimensional structure allows Schwartz to predict how individuals and groups might prioritize different values, and how these values might be in tension or harmony with one another. For example, a person who values self-direction highly may be at odds with someone who values conformity because of their opposing motivational goals.

In Schwartz' Circular Structure Model of Values (Figure 1), the refined 19 values are arranged in a circle, where adjacent values are motivationally congruent and conflicting values lie across from each other. Schwartz theorized that people experience either conflict or congruence of values if any pair or group of values are expressed in a single decision or behavior [17,22]. Three more circles were added to the model that categorize values. Values enclosed within the upper half of the outermost circle represent growth and self-expansion, tending

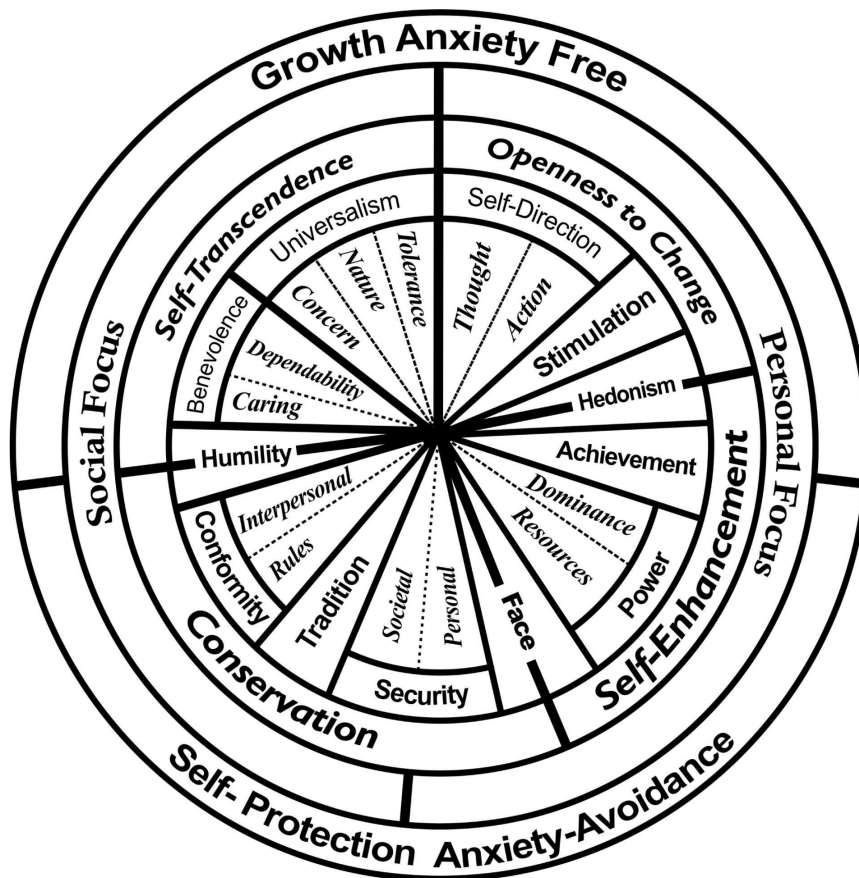


Figure 1 Circular Structure Model of 19 Values (adapted from Schwartz et al., 2012)

to motivate people when they are not experiencing anxiety. Conversely, values within the lower half of the circle serve to safeguard individuals from anxiety and potential threats. In the next inner circle, the values on the right emphasize personal concerns that focus on outcomes that benefit oneself while those on the left are socially oriented, prioritizing outcomes that support others or established institutions [18]. Schwartz emphasized that while each value embodies a goal pursued by individuals with variations shaped by cultural, societal, and personal differences, some values share similar end-states and can be simultaneously pursued, whereas others inherently conflict and prove mutually exclusive in a single behavior [17]. The said circular structure model and its principles are empirically supported by Skimina et al. [23] when they tested it in real-time behaviors.

While personal values remain stable over time in different situations, their level of importance shifts throughout childhood, settles during adolescence, and remains steady in later stages [24-25]. However, some studies documented value priorities change triggered by significant life-events, and age-related life circumstances and development [26-29].

In occupational context, a study on seafarers' personal values using Schwartz value theory was conducted by Hystad and Bye [30] but it specifically focused on the values of conservation versus openness-to-change and its relation to safety behavior and safety climate onboard the ship, using the short form of PVQ [31]. This research, however, used the revised PVQ-RR and used the framework of 19 narrowly defined values. Hystad and Bye posit that seafarers with a stronger emphasis on conservation values reported a higher level of safe behaviors [30].

Individuals in other occupations and industries were also found to have different value profiles in previous studies (see [32]). In hospitality, individuals with greater responsibility (restaurant managers, cooks) hold self-enhancement and openness-to-change values while those with lower responsibility (waiters and kitchen helpers) hold self-transcendence and conservation values [33]. In banking, managers hold a higher preference for achievement values and a lower preference for tradition values, whereas bank frontline workers have higher preference for conformity, hedonism, and power values and a lower preference for benevolence, universalism, and self-direction values [34]. Values centered on self-transcendence and concern for others are essentially important to teachers, psychologists, social workers, physiotherapists, and counsellors, while self-enhancement values, highlighting ambition, power, and control, tend to be more values by economists, business people, accountants, and managers [35]. In aviation, pilots were found to hold a higher preference for security and self-direction values [36]. In healthcare, self-transcendent values such as benevolence are prominent to nurses [37]. Using the same framework,

this study focused on the value preferences of seafarers, including specifically looking into their demographic profiles.

2 Materials and Methods

This study investigated the personal value priorities of seafarers, employing a quantitative survey. The survey targeted seafarers who have worked during or after 2010 onboard a ship and were selected using snowball sampling, resulting in a sample size of 1002 respondents. Table 2 presents the demographic profile of the respondents. The majority of the respondents are male seafarers (91.1%). This is due to the gender imbalance in seafaring influenced by the barriers to the employment of women seafarers [38-39]. While 36 countries are represented in the survey, the participants are predominantly Asians, where 72.6% of the respondents being Filipino seafarers. In terms of sea experience, those with 5 years of experience or less participated the most with 42.8%. In terms of rank, deck ratings had the highest representation with 16.9% of the respondents followed by second officers (10.4%).

The research instrument that was used was the Schwartz Revised Portrait Value Questionnaire (PVQ-RR), where the approval of usage was obtained from Shalom Schwartz. The reliability of the questionnaire was assessed by Schwartz and Cieciuch [40] in another study. A recommendation of Schwartz et. al, [18] was followed to design a shorter instrument with 38 items to generate more completed responses, where some questions were specifically transformed into a maritime context. Two items in the questionnaire correspond to each of the 19 values of Schwartz (38 items in total), and each item was rated by respondents in a likert scale according to how much like they are the *person* is described in each of the item: (6) very much like me; (5) like me; (4) moderately like me; (3) a little like me; (2) not like me; and (1) not me at all. Consequently, validation and reliability testing were conducted, where the questionnaire generated a Cronbach Alpha value of 0.97, which means a high reliability. Furthermore, the questionnaire, originally in English, was translated into other languages by native speakers including Spanish, Chinese, Korean, Bahasa, Japanese, Thai, Vietnamese and Burmese and all versions were pilot tested for validity. Clearance from the Research Ethics Committee of the World Maritime University was obtained prior to the distribution of the questionnaires.

The online platform QuestionPro was used to generate a survey questionnaire for each translation. Collectively, the questionnaires were viewed 4463 times, where 1012 participants completed the survey. Among those who answered the survey, 10 respondents did not give their consent. Finally, 1002 responses were used for the analysis.

Table 2 Demographic profile of respondents (N=1002)

Demographic variable	Category	n	%
Age	20-28 (Generation Z)	328	32.7
	29-44 (Millennials)	549	54.8
	45-60 (Generation X) and above 60	125	12.5
Gender	Male	913	91.1
	Female	82	8.2
	Prefer not to say	7	0.7
Nationality	Philippines	727	72.6
	Indonesia	58	5.8
	China	52	5.2
	Fiji	30	3.0
	United Kingdom	25	2.5
	Croatia	20	2.0
	Other (30 nationalities, n<20)	90	9.0
Sea Experience (in years)	5 or less	429	42.8
	6-10	248	24.8
	11-15	164	16.4
	16-20	94	9.4
	More than 20	67	6.7
Current/last rank onboard	Captain	60	6.0
	Chief Officer	54	5.4
	Second Officer	104	10.4
	Third Officer	69	6.9
	Deck Cadet	82	8.2
	Chief Engineer	42	4.2
	Second Engineer / 1AE	44	4.4
	Third Engineer / 2AE	65	6.5
	Fourth Engineer / 3AE	31	3.1
	Engine Cadet	60	6.0
	Electro Technical Engineer (ETO)	4	0.4
	ETO cadet	2	0.2
	Gas Engineer	1	0.1
	Deck Rating (Bosun, Pumpman, AB, OS, etc.)	169	16.9
	Engine Rating (Fitter, Motorman, Oiler, Wiper, etc.)	74	7.4
	Galley crew (Cook, Messman, Steward)	63	6.3
	Others	78	7.9

Quantitative analysis involved statistical analyses which followed the recommendations of Schwartz [41]. Specifically, scores were computed for the 19 values by taking the mean scores of the items that correspond to the value to determine the order of the values that seafarers hold. In the calculation of significant differences based on the respondents' demographic profile, internal reliabilities were checked by subtracting the individu-

al's mean rating of all values from each of the 19 value scores, thus centering the scores of each of the individual's 19 values around that individual's mean. These differences were used in the next statistical analyses. After determining that the distribution of data is non-normal, non-parametric tests were used, specifically Mann-Whitney U test to compare two groups and Kruskal-Wallis test to compare three or more groups [42]. After determining that the data is non-parametric, Mann-Whitney U test and Kruskal Wallis test were used to calculate the p-value, testing the null hypotheses that there is no significant difference in the value priorities between the groups in their demographic variables. A p-value ≤ 0.05 was adopted as a threshold for statistical significance, indicating that results with less than a 5% probability of occurring by chance were considered sufficient evidence to reject the null hypothesis, therefore signifying that there is statistically significant difference between or among the groups compared. Post-hoc tests using the Holm-Bonferroni method were conducted to specifically determine which categories of the demographic variables had significant differences [43]. Specifically, after doing the Kruskal Wallis test based on nationality, it was found that there was a significant difference in the values held by the respondents. In order to determine which pair led to the significant difference, the Holm-Bonferroni method was used.

3 Results

This section presents the key findings from the survey conducted to 1002 seafarers to determine their value priorities using the Schwartz framework. Responses to each item of PVQ-RR were averaged to calculate a mean score for every value dimension. Table 3 presents the mean scores for the four higher order values and the 10 board values of seafarers, while Table 4 presents the mean scores for each of the 19 narrowly defined values. All values in both tables are ranked from highest to lowest.

When framed according to four higher order values, seafarers hold Self-transcendence the highest (5.09) followed closely by Conservation (5.05). On the other hand, Openness to change was held third in the order of priority (4.64), while Self-enhancement is the lowest of the values held by seafarers (4.19). More specifically, in terms of 10 broad values, the values of Security, Benevolence, and Universalism were held on top, followed by Conformity, Self-Direction, Tradition, Achievement, Stimulation, and Hedonism. The value of Power is the lowest held value by the respondents.

Using the 19 narrowly defined value framework, the top five values that seafarers described to possess are Universalism-Nature, Security-Personal, Benevolence-Caring, Security-Societal, and Conformity-Rules. On the other hand, the values the lowest possessed by the respondents are Power-Resources, Hedonism, and Power-

Dominance. Figure 2 presents the mean scores using the circular model.

The data was grouped according to the demographic profile of the respondents, specifically their age, gender, nationality, sea experience, department, and rank.

Table 3 Mean Scores of four higher order values held by seafarers (N=1002)

Four higher order values	Mean Scores	10 broad values	Mean Scores
Self-Transcendence	5.09	Security	5.21
Conservation	5.05	Benevolence	5.15
Openness to change	4.64	Universalism	5.04
Self-Enhancement	4.19	Conformity	4.94
		Self-Direction	4.82
		Tradition	4.81
		Achievement	4.77
		Stimulation	4.51
		Hedonism	4.43
		Power	3.90

Note. Scale range: 6 (very much like me), 5 (like me), 4 (moderately like me), 3 (a little like me), 2 (not like me), 1 (not like me at all)

Table 4 Mean Scores of 19 narrowly defined values held by seafarers (N=1002)

Value	Mean Scores	Value	Mean Scores
Universalism-Nature	5.34	Achievement	4.75
Security-Personal	5.24	Conformity-Interpersonal	4.72
Benevolence-Caring	5.19	Self-Direction-Thought	4.66
Security-Societal	5.18	Humility	4.65
Conformity-Rules	5.12	Face	4.64
Benevolence-Dependability	5.10	Stimulation	4.50
Universalism-Concern	5.01	Power-Resources	4.46
Self-Direction-Action	5.00	Hedonism	4.44
Tradition	4.91	Power-Dominance	3.57
Universalism-Tolerance	4.77		

Note. Scale range: 6 (very much like me), 5 (like me), 4 (moderately like me), 3 (a little like me), 2 (not like me), 1 (not like me at all)

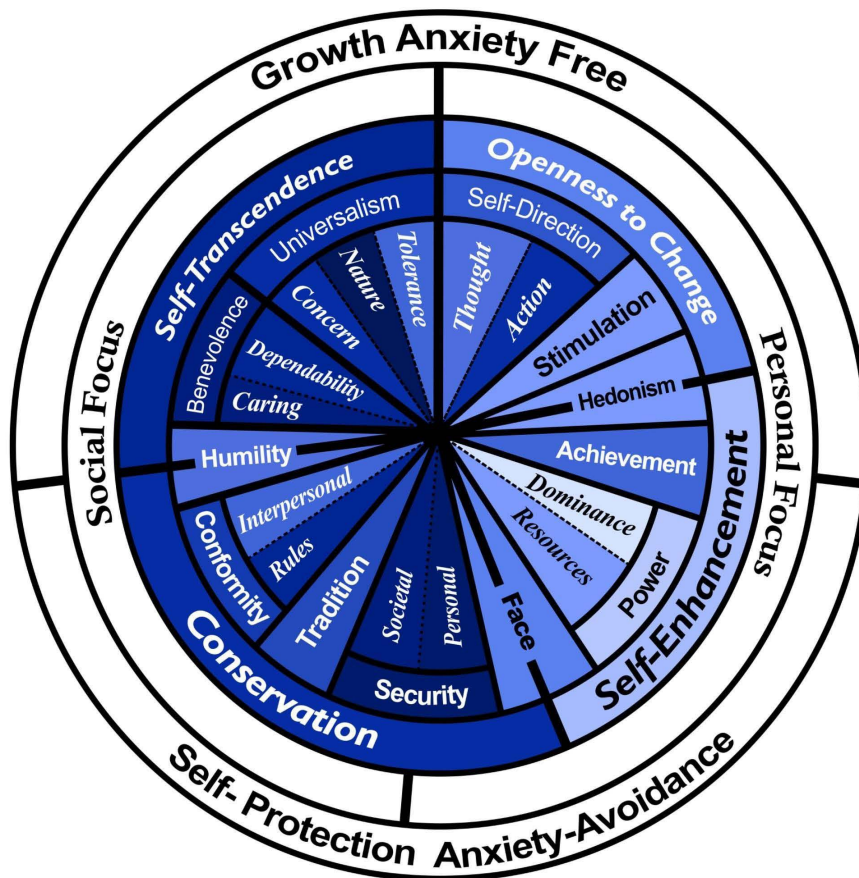


Figure 2 Value priorities of seafarers (hierarchy based on shade of color from darkest (top) to lightest (bottom))

Table 5 Significant difference of 19 narrowly defined values held by seafarers based on their demographic profile (N=1002)

Variable	Group	n	Kruskal Wallis (χ^2)	Mann Whitney U (z)	p-value	Decision
Age	20-28	328	1.88		0.39	Accept
	29-44	549				
	45 and above	125				
	20-35	645	1.80	0.07	Accept	
	Above 35	357				
Gender	Male	913	1.23		0.54	Accept
	Female	82				
	Prefer not to say	7				
Nationality	Philippines	727	31.87		0.00	Reject
	Indonesia	58				
	China	52				
	Fiji	30				
	United Kingdom	25				
	Croatia	20				
	Other (30 nationalities, n<20)	90				
Sea experience	5 or less	429	2.73		0.604	Accept
	6-10	248				
	11-15	164				
	16-20	94				
	More than 20	67				
Department	Deck	538	2.70		0.26	Accept
	Engine	323				
	Others	141				
Rank	Officers	618		1.11	0.27	Accept
	Ratings and other non-officers	384				
	Management	201	7.26		0.06	Accept
	Operational	273				
	Cadets	144				
	Ratings and other non-officers	384				

Table 5 presents the results of the statistical analyses conducted to determine the significant difference in the 19 narrowly refined values that seafarers hold, specifically Kruskal Wallis test and Mann Whitney U test. Null hypotheses were established that there is no significant difference between the groups in their variables. Decisions were also presented based on the results of the tests.

Based on the demographic profile of seafarer-respondents, the analyses revealed that their value priorities have no significant differences in terms of age, gender, sea experience, department and rank. However, there is a significant difference in seafarers' values based on their nationality. Post-hoc tests were conducted using the Holm-Bonferroni method to determine which pair/s of nationalities had significant differences in their values. The test revealed that seafarers from China have a significant difference in the values they hold as compared to the rest of the seafarers. Using the mean scores, the top five values held by Chinese seafarers are Universalism-Concern, Universalism-Nature, Univer-

salism-Tolerance, Conformity-Rules and Tradition while the lowest values they possessed are Power-Dominance, Hedonism, and Power-Resources, which are similar to the rest general respondents.

4 Discussion

Findings reveal that Self-Transcendence and Conservation are the predominant higher-order value orientations among seafarers, with pronounced emphasis on broad values of Security, Benevolence, Universalism, and Conformity. In particular, the following specific values came out to shape the motivations and behaviors of seafarers: Universalism-Nature, Security-Personal, Benevolence-Caring, Security-Societal, and Conformity-Rules.

Self-Transcendence encompasses values directed towards the welfare of others and the broader world, with Benevolence, particularly Benevolence-Caring and Universalism, including Universalism-Nature as key expressions. Prior studies have highlighted the importance of benevolence among seafarers, creating a supportive envi-

ronment linked to job satisfaction [44]. This means that mutual care and treating crewmates as a family are essential for effective teamwork and psychological well-being onboard [45]. More importantly, Benevolence-Caring emerged as one of the values on top, as many seafarers choose to work onboard the ship, motivated to build a better future for their loved ones, even if it means being away from them for the duration of their contracts.

Moreover, Universalism-Nature reflects seafarers' unique relationship with the marine environment, often resulting in strong environmental stewardship and advocacy for sustainable practices [46]. Seafarers' behavior towards protecting the environment, specifically the marine environment, stems from several factors, including regulatory compliance, specifically MARPOL, education and training, and awareness on sustainable practices more than ever before. However, Widanti et al. also found that although seafarers have a high tendency to behave pro-marine environmentally, some admit rarely and rarely engage in pro-marine environmental behavior [47].

Conservation values, particularly Security and Conformity, are also notably prioritized by seafarers. More specifically, the behaviors demonstrated by the values of Security and Conformity-Rules are deeply embedded in seafaring practices. Security, both Security-Personal and Security-Societal, pertains to the importance of safety, order, and stability, which are paramount concerns given the inherent hazards of maritime work [40]. The prioritization of Security-Societal similarly aligns with findings from Hystad and Bye that seafarers with a stronger emphasis on conservation values reported a higher level of safe behaviors [30]. Moreover, Abila et al. likewise noted that there is a pervasive culture of "ship first" among seafarers as ship's safe operations take precedence over everything else [48]. Unfortunately, this, at times, is at the expense of seafarers mental health and overall health [48].

On the other hand, Conformity-Rules emerges as another critical value, supporting the need for strict adherence to regulations and standardized procedures in maritime operations. Seafarers are bound by various IMO instruments that address various aspects of shipping including safety, pollution prevention, training and certification, among others. Such rules and regulations are intended and implemented for the good of the maritime industry. For example, the implementation of the International Safety Management (ISM) Code has improved safety awareness and operational conduct within shipping operations [49]. High conformity to rules and regulations is often observed in seafaring, which demands precise coordination and discipline, reinforcing a culture of rule-keeping and collective responsibility.

The congruence of self-transcendent and conservative values among seafarers suggests an adaptive response to the demands of their occupational environ-

ment. The high value placed on benevolence and conformity helps mitigate conflict, ensures compliance with safety norms, and fosters group solidarity which is essential for managing crises at sea. Moreover, the congruence of security and conformity to rules is supported by research where positive safety climate correlates with higher adherence to safety protocols [50]. Furthermore, the value of Universalism-Nature highlights seafarers' first-hand experience of the ocean's vulnerability, motivating environmentally responsible behaviors.

Interestingly, the values of power-resources and power-dominance were the lowest held by seafarers despite working on a very hierarchical work structure, managing crew and resources.

When compared with other professions, seafarers' value priorities reveal convergence with nurses. A similar study conducted on nurses revealed that self-transcendent values such as benevolence and universalism are the most prominent, reflecting the core principles for the nursing profession – caring for others and promoting social justice [37]. These are similarly the core values of seafarers specifically caring for family members - the reason for enduring being away at sea to provide for their needs.

5 Conclusions, Limitations and Recommendations

This study identified the value orientations of seafarers based on Schwartz's value theory. Considering the unique context of the work and life of seafarers, this study found that seafarers exhibit a distinctive pattern of value priorities. Prominent among these values are self-transcendence and conservation, specifically Security, Benevolence, Universalism and Conformity broad values. Universalism-Nature, Security-Personal, Benevolence-Caring, Security-Societal, and Conformity-Rules are the particularly defined values that seafarers hold. This finding reflects that seafarers give importance to safety, security, environmental protection, and the human element in the maritime industry, which are aligned to IMO's mission. On the other hand, seafarers ranked Power-Resources, Hedonism and Power-Dominance the lowest, indicating that seafarers value their individual and seafarers' group welfare as well as the welfare of the environment. In addition, the findings reveal the flexibility and adoptability of Schwartz's value framework in understanding the values of seafarers.

With the findings of this study, MET institutions may develop course packages that intentionally and explicitly address values development and formation of maritime students. Moreover, Schwartz's framework can also be applied in analyzing marine incident or accident case studies to teach students how underlying values influence the causes and outcomes of such events. In addition, the value priorities identified in this study should

also be emphasized, highlighting the values of Security and Universalism-Nature should be placed on top of the hierarchy in students' values formation. This means that not only the cognitive knowledge and psychomotor skills, but also the affective dispositions are covered in educating and training maritime students to become competent seafarers. Furthermore, shipping companies may initiate and implement values formation programs that align with the requirements of seafaring and the predominant values of seafarers, particularly in reinforcing value formation of seafarers, supporting safety, security, environmental protection, well-being and interpersonal relations.

For future work, researchers may consider conducting longitudinal studies to look at possibilities of shifting value priorities. For instance, research on the effect of an intervention by MET institutions may be explored. Also, the values of the seafarers over the course of their maritime careers, with consideration to industry changes, may also be studied. Additionally, studying the values held by other maritime stakeholders may also prove valuable in determining the alignment of value priorities in the maritime industry.

This study focused on determining the value priorities of seafarers. Future research may delve into the value system that seafarers need to become competent in their profession. Moreover, the respondents of this study were mostly Filipino seafarers, causing a disparity in the sample sizes when grouped according to nationality, which is a limitation of the study. Other researchers may focus on seafarers from other countries for better cultural representation and comparison. Additionally, future researchers may conduct follow up studies on Chinese seafarers with an increased number of respondents.

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References

- [1] Abdulfatai, I., Ismail, N.A.H., & Abdullahi, H.O.. (2014). Challenges of using ICT in assessing and developing students' affective domain in education. *Journal of Education and Vocational Research*, 5(3), 138–145. <https://doi.org/10.22610/jevrv.v5i3.162>
- [2] Salimin, N., Jani, J., Shahril, M. I., & Elumalai, G. (2015). Validity and reliability of comprehensive assessment instruments for handball and badminton games in physical education. *Asian Social Science*, 11(23). <https://doi.org/10.5539/ass.v11n23p12>
- [3] Kafol, B. S., Denac, O., Žnidaršič, J., & Zalar, K. (2015). Analysis of Music Education Objectives in learning Domains. *Procedia - Social and Behavioral Sciences*, 186, 95–104. <https://doi.org/10.1016/j.sbspro.2015.04.069>
- [4] Dorji, P., & Yangzom. (2021). Affective Domain: the uncharted area of teaching and learning in tertiary education. *Asian Research Journal of Arts & Social Sciences*, 51–65. <https://doi.org/10.9734/arjass/2021/v13i130206>
- [5] Verplanken, B., & Holland, R. W. (2002). Motivated decision making: Effects of activation and self-centrality of values on choices and behavior. *Journal of Personality and Social Psychology*, 82(3), 434–447. <https://doi.org/10.1037/0022-3514.82.3.434>
- [6] Lin, W., & Cheng, H. (2020). Improving maritime safety through enhancing marine process management: the application of balanced scorecard. *Management Decision*, 59(3), 604–615. <https://doi.org/10.1108/md-08-2019-1044>
- [7] Zhou, Y., Soh, Y. S., Loh, H. S., & Yuen, K. F. (2020). The key challenges and critical success factors of blockchain implementation: Policy implications for Singapore's maritime industry. *Marine Policy*, 122, 104265. <https://doi.org/10.1016/j.marpol.2020.104265>
- [8] Bardi, A., & Schwartz, S. H. (2003). Values and behavior: Strength and structure of relations. *Personality and Social Psychology Bulletin*, 29(10), 1207–1220. <https://doi.org/10.1177/0146167203254602>
- [9] Roccas, S., & Sagiv, L. (2010). Personal Values and Behavior: Taking the Cultural Context into Account. *Social and Personality Psychology Compass*, 4(1), 30–41. <https://doi.org/10.1111/j.1751-9004.2009.00234.x>
- [10] Young, R., & West, P. (2010). Do “good values” lead to “good” health-behaviours? Longitudinal associations between young people's values and later substance-use. *BMC Public Health*, 10(1). <https://doi.org/10.1186/1471-2458-10-165>
- [11] Sagiv, L., & Roccas, S. (2017). What personal values are and what they are not: Taking a Cross-Cultural perspective. In *Springer eBooks* (pp. 3–13). https://doi.org/10.1007/978-3-319-56352-7_1
- [12] Faisal, S., Ivo, J., Fadaleh, S. A., & Patel, T. (2023). Exploring the Value of Real-Time Medication Adherence Monitoring: A Qualitative study. *Pharmacy*, 11(1), 18. <https://doi.org/10.3390/pharmacy11010018>
- [13] Schwartz, S. H. (1992). Universals in the Content and Structure of Values: Theoretical advances and empirical tests in 20 countries. In *Advances in experimental social psychology* (pp. 1–65). [https://doi.org/10.1016/s0065-2601\(08\)60281-6](https://doi.org/10.1016/s0065-2601(08)60281-6)

- [14] Rokeach, M. (1973). *The nature of human values*. New York: Free Press. <https://doi.org/10.1093/sw/19.6.758>
- [15] Feather, N. T. (1995). Values, valences, and choice: The influences of values on the perceived attractiveness and choice of alternatives. *Journal of Personality and Social Psychology*, 68(6), 1135–1151. <https://doi.org/10.1037/0022-3514.68.6.1135>
- [16] Beierlein, C., Kuntz, A., & Davidov, E. (2016). Universalism, conservation and attitudes toward minority groups. *Social Science Research*, 58, 68–79. <https://doi.org/10.1016/j.ssresearch.2016.02.002>
- [17] Schwartz, S. H. (2012). An overview of the Schwartz Theory of basic values. *Online Readings in Psychology and Culture*, 2(1). <https://doi.org/10.9707/2307-0919.1116>
- [18] Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., Ramos, A., Verkasalo, M., Lönnqvist, J., Demirutku, K., Dirilen-Gumus, O., & Konty, M. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology*, 103(4), 663–688. <https://doi.org/10.1037/a0029393>
- [19] Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the Cross-Cultural Validity of the Theory of Basic Human Values with a Different Method of Measurement. *Journal of Cross-Cultural Psychology*, 32(5), 519–542. <https://doi.org/10.1177/0022022101032005001>
- [20] Schwartz, S. H. (1996). Value priorities and behavior: applying a theory of integrated value systems. <https://www.palermo.edu/cienciassociales/psicologia/publicaciones/pdf/Psico2/2Psico%2007.pdf>
- [21] Schwartz, S. H. (2015). Basic individual values: sources and consequences. In *Oxford University Press eBooks* (pp. 63–84). <https://doi.org/10.1093/acprof:oso/9780198716600.003.0004>
- [22] Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, 50(4), 19–45. <https://doi.org/10.1111/j.1540-4560.1994.tb01196.x>
- [23] Skimina, E., Cieciuch, J., Schwartz, S. H., Davidov, E., & Algesheimer, R. (2018). Testing the circular structure and importance hierarchy of value states in real-time behaviors. *Journal of Research in Personality*, 74, 42–49. <https://doi.org/10.1016/j.jrp.2018.02.001>
- [24] Milfont, T. L., Milojev, P., & Sibley, C. G. (2016). Values stability and change in adulthood. *Personality and Social Psychology Bulletin*, 42(5), 572–588. <https://doi.org/10.1177/0146167216639245>
- [25] Vecchione, M., Schwartz, S., Alessandri, G., Döring, A. K., Castellani, V., & Caprara, M. G. (2016). Stability and change of basic personal values in early adulthood: An 8-year longitudinal study. *Journal of Research in Personality*, 63, 111–122. <https://doi.org/10.1016/j.jrp.2016.06.002>
- [26] Bardi, A., & Goodwin, R. (2011). The dual route to value change: individual processes and cultural moderators. *Journal of Cross-Cultural Psychology*, 42(2), 271–287. <https://doi.org/10.1177/0022022110396916>
- [27] Lönnqvist, J., Verkasalo, M., Wichardt, P. C., & Walkowitz, G. (2013). Personal values and prosocial behaviour in strategic interactions: Distinguishing value-expressive from value-ambivalent behaviours. *European Journal of Social Psychology*, 43(6), 554–569. <https://doi.org/10.1002/ejsp.1976>
- [28] Bardi, A., Buchanan, K. E., Goodwin, R., Slabu, L., & Robinson, M. (2014). Value stability and change during self-chosen life transitions: Self-selection versus socialization effects. *Journal of Personality and Social Psychology*, 106(1), 131–147. <https://doi.org/10.1037/a0034818>
- [29] Gouveia, V. V., Vione, K. C., Milfont, T. L., & Fischer, R. (2015). Patterns of value change during the life span. *Personality and Social Psychology Bulletin*, 41(9), 1276–1290. <https://doi.org/10.1177/0146167215594189>
- [30] Hystad, S. W., & Bye, H. H. (2013). Safety behaviours at sea: The role of personal values and personality hardiness. *Safety Science*, 57, 19–26. <https://doi.org/10.1016/j.ssci.2013.01.018>
- [31] Schwartz, S. H. (2007). Value Orientations: measurement, antecedents and consequences across nations. In *SAGE Publications Ltd eBooks* (pp. 169–203). <https://doi.org/10.4135/9781849209458.n9>
- [32] Knafo, A., & Sagiv, L. (2004). Values and work environment: Mapping 32 occupations. *European Journal of Psychology of Education*, 19(3), 255–273. <https://doi.org/10.1007/bf03173223>
- [33] Ariza-Montes, A., Arjona-Fuentes, J. M., Han, H., & Law, R. (2016). Employee responsibility and basic human values in the hospitality sector. *International Journal of Hospitality Management*, 62, 78–87. <https://doi.org/10.1016/j.ijhm.2016.12.001>
- [34] Tartakovsky, E., & Cohen, E. (2013). Values in the bank: Value preferences of bank frontline workers and branch managers. *European Journal of Work and Organizational Psychology*, 23(5), 769–782. <https://doi.org/10.1080/1359432x.2013.794933>
- [35] Arieli, S., Sagiv, L., & Roccas, S. (2018). Values at work: The impact of personal values in organisations. *Applied Psychology*, 69(2), 230–275. <https://doi.org/10.1111/apps.12181>
- [36] Iqbal, T., Taveter, K., Strenze, T., Hussain, W., Haggag, O., Matthews, J. A., & Piirisild, A. (2023, May 26). *Identifying human values from goal models: An industrial case study*. arXiv.org. <https://arxiv.org/abs/2305.16741>
- [37] Ciscic, R. S. (2024). Understanding the human value preferences of Croatian nurses through the lens of Schwartz's theory. *Journal of Diabetes Metabolic Disorders & Control*, 11(2), 95–99. <https://doi.org/10.15406/jdmcd.2024.11.00284>
- [38] Kitada, M. (2020). Women Seafarers: An analysis of Barriers to their employment. In *WMU studies in maritime affairs* (pp. 65–76). https://doi.org/10.1007/978-3-030-49825-2_6
- [39] MacNeil, A., & Ghosh, S. (2016). Gender imbalance in the maritime industry: impediments, initiatives and recommendations. *Australian Journal of Maritime & Ocean Affairs*, 9(1), 42–55. <https://doi.org/10.1080/18366503.2016.1271262>
- [40] Schwartz, S. H., & Cieciuch, J. (2021). Measuring the refined theory of individual values in 49 cultural groups: Psychometrics of the Revised Portrait Value Questionnaire. *Assessment*, 29(5), 1005–1019. <https://doi.org/10.1177/1073191121998760>

- [41] Schwartz, S. H. (2021). A Repository of Schwartz Value Scales with Instructions and an Introduction. *Online Readings in Psychology and Culture*, 2(2). <https://doi.org/10.9707/2307-0919.1173>
- [42] Sedgwick, P. (2012). Non-parametric statistical tests for independent groups: numerical data. *BMJ*, 344(may16 1), e3354. <https://doi.org/10.1136/bmj.e3354>
- [43] Holm, S. (1979). A Simple Sequentially Rejective Multiple Test Procedure. *Scandinavian Journal of Statistics*, 6(2), 65–70. <http://www.jstor.org/stable/4615733>
- [44] McVeigh, J., MacLachlan, M., Vallières, F., Hyland, P., Stilz, R., Cox, H., & Fraser, A. (2019). Identifying predictors of stress and job satisfaction in a sample of merchant seafarers using structural equation modeling. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.00070>
- [45] Tang, L., Abila, S., Kitada, M., Malecosio, S., & Montes, K. K. (2022). Seafarers' mental health during the COVID-19 pandemic: An examination of current supportive measures and their perceived effectiveness. *Marine Policy*, 145, 105276. <https://doi.org/10.1016/j.marpol.2022.105276>
- [46] Akamangwa, N. (2020). Environmental management at sea: What being 'Green' means for seafarers. In *WMU studies in maritime affairs* (pp. 113–126). https://doi.org/10.1007/978-3-030-49825-2_10
- [47] Widanti, N. S., Marjono, M., Yanuwadi, B., Kurniawan, A. (2024). Pro-Marine environmental behavior of seafarers. *Wacana Jurnal Sosial Dan Humaniora*, 27(1), 37–45. <https://doi.org/10.21776/ub.wacana.2024.027.01.05>
- [48] Abila, S., Kitada, M., Malecosio, S., Tang, L., & Subong-Espina, R. (2023). Empowering Seafarers as agents of their mental health: The role of Information and Communication Technology in Seafarers' Well-Being. *INQUIRY the Journal of Health Care Organization Provision and Financing*, 60. <https://doi.org/10.1177/00469580231162752>
- [49] Størkersen, K. V., Antonsen, S., & Kongsvik, T. (2016). One size fits all? Safety management regulation of ship accidents and personal injuries. *Journal of Risk Research*, 20(9), 1154–1172. <https://doi.org/10.1080/13669877.2016.1147487>
- [50] Mallam, S. C., Ernstsens, J., & Nazir, S. (2019). Safety in Shipping: Investigating safety climate in Norwegian maritime workers. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 63(1), 1844–1848. <https://doi.org/10.1177/1071181319631007>