Psychological Characteristics of Seafarers and Their Influence on Vessel Safety

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ABSTRACT

Although the shipbuilding technology and shipping management mechanism of countries all over the world are more and more advanced, the shipping safety accidents still occur from time to time, and the human factors account for a large proportion. The research shows that the bad psychological state of the crew will have a great impact on the safety of shipping. Firstly, this paper analyzes the main characteristics of seafarers' psychology from the perspectives of working environment, work life mode and management mechanism. Then, it focuses on the analysis of the main impact of crew psychology on ship safety. Finally, from the perspective of optimizing crew psychology, it explores the strategies to improve the safety level of the ship industry.

Keywords: Crew, psychological characteristics, ship safety, shipping

1. INTRODUCTION

China is rich in shipping resources, developed shipping industry, and the shipbuilding technology is in the forefront of the world. In the field of shipping, safety management has been attached great importance. Through the analysis of the causes of a large number of shipping accidents, it is found that, in addition to the extreme external environmental factors, most of the accidents are caused by human factors. Especially in the ocean voyage, as the main body of the ship to carry out the navigation production task, the psychological state of the crew is affected by many factors, which will affect the safety of ship shipping. In order to further improve the safety level of shipping, it is necessary to explore the relationship between psychological characteristics of seafarers and ship safety.

2. Analysis of psychological characteristics of seafarers

In order to improve the safety of navigation and production, in addition to the quality of ship hardware and external environment, the crew factor is also very important. Specifically speaking, due to the particularity of water transportation environment and task, the psychological state of seafarers is special [1]. In addition, seamen's psychology will be affected by their own profes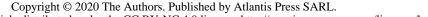sional quality, psychological quality, shipping production task content, shipping process environment, leadership and management mode, reward and punishment system, reward prospect and so on. The psychological characteristics of seafarers can be analyzed from the following aspects:

2.1. Limitations of working environment and external environment

In the shipping production activities, the crew will work and live in the effective space for a long time. Especially in the ocean voyage, the crew need to stay on the ship for several days or even months. For a long time in the limited space, the crew contact with relatively single personnel and things, and they are faced with repeated work every day, which inevitably leads to boredom; in the ocean voyage, the external scenery that the crew sees every day is also very simple, and the sense of unknown in the vast sea makes the crew face greater pressure. Therefore, from the perspective of environment, the psychological needs to overcome the difficulties of working in a limited and unitary environment for a long time [2-5].

2.2. Pressure from work content

Although the modern ship and communication technology is very developed, the crew still faces a lot of unknown risks in the ocean voyage. In harsh

weather conditions, on the one hand, crew members need to withstand the impact of hull turbulence and violent rain on their bodies, on the other hand, they also need to use professional technology to deal with risks [3]. In other words, during the voyage, the crew's psychology is in a state of tension for a long time, which may not be improved for a long time, leading to changes in the psychological state of the crew.

2.3. Influence of special management mode

In order to ensure the successful completion of the navigation task, coupled with the mature mechanism formed in the field of navigation for hundreds of years, a strict management system is implemented in the navigation of ships. There is a clear division of labor within a navigation team, and every member must obey the leadership of the superior. In the work and life during the voyage, the autonomy of the crew is limited. Although the crew still has the basic autonomy, the strict relationship between the superior and the subordinate will tend to be abnormal during the voyage, which leads to some problems in the relationship between the crew and the leader, between the crew and the crew, between the crew and the collective. It is mainly manifested in the lack of friendship, lack of care, team atmosphere tension and so on, which leads to excessive psychological pressure of seafarers, and then forms negative emotions.

2.4. The existence of informal groups

Considering the special environment and management mechanism of the ship during navigation, coupled with the long-term principle of the crew, family, single work, dull life and information block, it is easy to form an informal group of the crew Group [6-7]. The so-called informal group, that is, in the process of sailing, based on the similarity of work content, the identity of the region, the consistency of interests and hobbies, and the influence of some special factors, gangs appear in the group. Although this kind of informal group makes some compensation for the crew's negative psychology, if it is not guided positively, it will easily lead to serious team internal friction and affect ship safety.

3. The influence of seaman's psychology on ship safety

In the ship production and navigation activities, the psychological state of the crew will have an important adverse impact on ship safety. Whether it is the negative psychological emotion or the crew's maladjustment to the work content and working environment, it may lead to the occurrence of safety accidents. Specifically speaking, the manifestation

and harm of crew's bad psychological state mainly include the following aspects:

3.1. Fluke and slack mentality

This kind of psychology is mainly manifested in the crew's lack of enthusiasm for their work, their inaction, and their ignorance of the relevant rules and regulations on safe production. In practical work, with a fluke mentality, excessive reliance on experience, resulting in a lot of security risks cannot be found in time, and then lead to accidents. In addition, some crew groups unilaterally pursue benefits and have a fluke mentality on safety management, resulting in a large number of illegal operations, resulting in frequent safety problems [8].

3.2. Pessimism and anxiety

The forms of pessimism and impatience are opposite, but they have great adverse effects on ship safety. In fact, some of the crew in the long voyage, due to their poor psychological quality, coupled with the lack of effective counseling, leading to a long-term psychological switching between pessimistic and anxious. Pessimism can easily spread among the crew and affect the mood of the whole crew. However, anxiety will lead to irregular work behavior of crew members, even damage equipment, public resources and even hurt others, and also affect the team atmosphere. Obviously, these bad emotions are not only harmful to the physical and mental health of the crew, but also seriously affect the work quality and ship safety.

3.3. Blind arrogance and excessive seniority mentality

In the field of navigation, there is a certain "atmosphere of the river and the lake" among the crew. The typical embodiment is that some experienced crew members are blindly arrogant. On the one hand, this kind of psychology will lead to the lack of standardization in work, and even risk-taking behavior, which will seriously threaten the safety of ships; On the other hand, it will lead to over instilling the concept of ranking according to seniority when getting along with other crew members, which will lead to tension among crew members, and at the same time, it will also lead to arbitrary handling of some problems, which will affect the work quality and ship safety [9-10].

4. Main strategies to improve Seamen's bad psychology

4.1. Implement humanized management mechanism

The relevant units should pay attention to the optimization of the ship's internal environment, including the accommodation and catering environment of the crew, and try their best to create a relatively comfortable working and living environment for the crew. At the same time, it can reasonably allocate leisure and entertainment places, so that the crew can be relaxed after work, and relieve the bad mood caused by long-term navigation and work. In terms of management, attention should be paid to the physical and mental state of the crew, and effective measures should be taken to relax the crew and make the staff feel love and recognition [11].

4.2. Allocation of psychological counseling staff

The ship and navigation management unit shall allocate special psychological guidance personnel; whose main work includes three aspects. Firstly, it supports the optimization of ship internal environment and the formulation of navigation management system according to the crew's work content and navigation task content. Secondly, for important navigation, the crew team can be equipped with psychological counseling personnel to provide necessary psychological guidance for the crew during the voyage. Third, in the crew culture construction and daily management, help the crew know how to confront and self-dredge the bad psychology and emotion. The allocation of psychological guidance personnel is helpful to find out the crew's bad mood and bad psychology in time. According to the daily observation and management analysis, an effective safety accident avoidance mechanism can be established for the ship safety management, so as to further improve the safety management level of the ship.

4.3. Promoting the change of crew's role

After research, it is found that most of the crew's psychological problems are due to the long-term single role of such professionals, which inevitably leads to psychological problems. Therefore, crew management personnel should actively promote the change of crew role by optimizing management mode, reforming working mechanism and introducing new technology. Managers should abandon the traditional hierarchical management mode and appropriately weaken the importance of qualification and experience in personnel management. In crew management, more flexible team management mechanism is adopted to avoid single and rigid interpersonal relationship. Through the flexible management mode, each crew member can give full play to their own professional skills and talents. For example, some crew members have the potential of entertainment performance. They can act as the person in charge of the ship's cultural activities, so that the crew can be relaxed after work and enhance the sense of participation of each crew member.

4.4. Promoting the change of crew's role

Nowadays, ship manufacturing technology is making progress in an all-round way, and a large number of modern technologies are becoming more and more valuable in ships and navigation. Therefore, modern technology should be used to optimize the ship's internal environment and provide more help for the crew's long-distance work and life. For example, by comprehensively upgrading the ship's equipment and facilities, optimizing the electrical automation mechanism, reducing the crew's working time in harsh environment. Upgrade ship dormitory, canteen and entertainment area to provide more comfortable living, living and entertainment environment for crew. In addition, by upgrading the communication equipment, the crew can get more opportunities to get outside consultation and contact their families, so as to relieve their psychological pressure.

5. CONCLUSION

To sum up, China's shipbuilding and shipping industry is developing rapidly. For the main practitioners in this field, seafarers, we should not only pay attention to their professional level, but also pay attention to their mental health. Therefore, the relevant managers should pay attention to the mental health of seafarers and analyze the causes and harmfulness of psychological problems. On this basis, by optimizing the ship environment, reforming the management system and strengthening the mental health assistance of crew members, we can ensure the mental health of the crew, reduce the ship safety problems, and improve the ship work and management level.

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