

Research on the Current Situation and Promotion Method of Pilot Psychological Quality in China

Wang Hui, Guo Yaning, Miao Danmin

Department of Military Psychology of Air Force Medical University, Xi'an 710032, China

ABSTRACT. *Nowadays, the selection of pilots is more stringent than in other professions. In the selection of pilots in China, besides those physical symptoms of illness which are not suitable for flight work such as hypertension, the psychological qualities of candidate pilots are also carefully investigated. Psychological quality has an important influence on the accomplishment of flight missions to some extent. In this paper, the status quo of pilots' psychological quality in China and the ways to improve it are studied.*

KEYWORDS: *Pilots; Psychological Quality; Current Situation; Promotion Methods*

1. Introduction

According to news reports, on March 25, an A320 plane crashed in southern France. Because it belongs to German Wing, a low-cost airline owned by Lufthansa Airlines, people's attention on low-cost airlines has increased rapidly for a time. The hot topic also includes whether the low-cost airline services are "cheap" and the old level of aircraft models[1]. On March 30, the German Dusseldorf Procuratorate's statement on the investigation of the air crash made the German wing pilot Rubitz the focus. The statement said that it had been confirmed that Rubitz had received psychotherapy before becoming a pilot, and records showed that he had suicidal tendencies[2]. This is just like the turning point of the TV series, which makes people feel sorry for the incident, but at the same time, it also shifts their attention from the air crash to the mental health of pilots[3].

2. Requirements of pilots' psychological quality at present

Because of the complexity and adventure of the helicopter flight profession, it is decided that not everyone can become a helicopter pilot. In recent years, there has been a consensus in people's minds that the body of helicopter pilots is no better than that[4]. In fact, it is more important to have good psychological quality.

Because good psychological quality is the key to ensure the safety of helicopter flight, So, what kind of psychological qualities should a helicopter pilot possess?

At present, pilots usually have a physical examination every six months, usually, including mental illness related content, and some departments of pilots will have physiological indicators testing and psychological talks before the mission[5]. Introduced by Deng Lifang, In addition, civil aviation organizations should check the coordination and cooperation of aircrews during flight, and also check whether pilots can make full use of various information resources and control means in the cockpit to effectively deal with safety problems under the condition of modern information technology.

In addition to psychological counseling, the self-adjustment of pilots is also important[6]. Shi Xun put forward that the training of pilots should focus on three aspects. Firstly, the healthy lifestyle including balanced diet and proper exercise; secondly, the mind level which refers to cultivating good psychological quality, avoiding low self-esteem and negative inertia ideas; thirdly, the aspect of spirit, involving a higher level than psychology, including the values and viewpoints of life, the understanding of success or failure.

The more advanced modern flight technology hold, the higher the degree of information and automation, the lower the physical load of pilots, but the more the psychological load[7]. Therefore, the guiding role of Psychological Science in-flight activities is more important, because the modern information society itself is open psychology.

3. Emphasis on Psychological Quality Survey in Pilot Selection in China

3.1 Special occupation, high pressure of responsibility

In the eyes of ordinary people, pilots flying large planes are engaged in a shiny profession - wearing uniforms, wearing sunglasses, sitting in front of dazzling dashboards, operating in an orderly manner. If you look at the industry of pilots from a professional perspective, you will see that pilots are facing more dangers and pressures than you can imagine. According to the National Survey of Occupational Injury Mortality released by the U.S. Bureau of Labor Statistics, pilots rank third among the most dangerous occupations, with fishing and lumberjacking ranking first and second. In 2012, 71 pilots and random engineers were killed at work.

In addition to death threats, pilots face pressures that most other industries cannot match. "During the whole flight, the pilot was the leader of the aircraft. He needs to face all kinds of emergencies, and the modern automated flight system makes the flight process more boring. Shi Kan, director of the Social Psychology Research Center of the Academy of Chinese Sciences and professor of psychology at the Renmin University of China, told the Chinese Journal of Science in an interview.

The pressure of pilots comes from many aspects, they need to face the enormous

physical and mental load, fatigue and sleep disorders, cross-time zone biological disorders brought about by flight work; moreover, their circle of friends is often narrow, due to lack of regular rest time, it is difficult to get together with friends, and some couples are flying families, children. No one takes care of it. These problems of family, marriage and interpersonal relationship are important sources of pilots' psychological stress.

These stresses, if released nowhere, can lead to depression in some pilots. "Any problems associated with psychological stress can occur. The most common ones are distraction, anxiety, depression, job burnout, and serious depression. Zhang Kan, a researcher at the Institute of Psychology, Chinese Academy of Sciences, further elaborated.

In 2013, the Federal Aviation Administration (FAA) released a survey showing that 8 of the 2758 air crashes in the United States between 2002 and 2012 were caused by suicide by pilots, accounting for about 0.3% of the total.

However, compared with German wing pilot Lubbitz, American suicide pilots did not fly airliners at that time. According to the report, seven of the eight suicide pilots committed suicide by flying an airplane alone, and one of the pilots also carried a passenger. At the same time, the report says it is still difficult to predict and prevent suicides by pilots flying planes, and such incidents are "likely not to be made public or recognized". If we want to stop such incidents from happening, we should do our work ahead rather than makeup for them afterward.

3.2 Both physical and mental health should be screened.

Nowadays, the selection of pilots is more stringent than in other professions. When choosing pilots in our country, all aspects will be checked. For example, the health of the pilots is in charge of the aeronautical doctors, and the patients with diseases that are not suitable for flying work, such as hypertension, will not be recruited. At the same time, their psychological quality was also investigated. Psychological measurement naturally depends on psychological questionnaires. In recent years, some civil airlines have added psychological testing links to the selection of pilots, and some have also adopted a special comprehensive evaluation system of pilots' psychological quality to inspect and evaluate pilot-level flight Member. In addition, "in the recruitment process, we will also use situational tests that are closer to flying life, such as games or basketball games. The pilots' legs play an important role in the operation of airplanes, so basketball, which does not harm the legs, is relatively suitable for identifying the psychological characteristics of alternate pilots. Basketball is an activity that requires both individual shooting scores and team cooperation. There are both psychologists and flight coaches watching and evaluating. Because of the training experience of many flying cadets, the latter will "play" in their minds the "cognitive model" of the past successful solo flyers basketball behavior, which is In this way, it is easy to make accurate predictions for these novices. He has participated in the design of pilots' psychological counseling systems many times.

Although this industry will cause pilots to face tremendous pressure, I think that depression is still related to individual personality. Some people are really not fit to be pilots, such as those who are too assertive or too introverted and hesitant. Because the cheerful personality can better self-adjust so that negative emotions can be transferred. On the contrary, some people with more isolated personality cannot effectively vent their emotions. Therefore, this personality difference is also an important consideration in the recruitment and training of pilots.

3.3 Mental health needs continuous attention

Although there is a strict screening system in the flying schools when choosing pilots, Zhang Kan said: "Although there is a system, the implementation is not strict enough. For the interests of pilots and flight safety, it is necessary to strengthen the supervision of the implementation of the system while improving the detection system.

In this regard, psychologists of the Chinese Academy of Sciences have repeatedly called for the establishment of national psychological standards for pilots, astronauts, and other special occupations. "In recent years, our pilots' safety management orientation has changed greatly, from passive coping to active prevention. Among them, special attention is paid to the cultivation of positive qualities such as pilots' psychological capital. She said, "In January this year, under the guidance of a group of psychological experts, the National Civil Aviation Administration of China has completed the Guidelines for Pilots' Mental Health."

At present, the "Guidelines" in the civil aviation system have reached a consensus: after various emergencies, pilots will produce corresponding stress response, which may lead to serious physical exhaustion and psychological immunity decline, and even may lead to physical and mental health problems. If these problems can not be timely psychological intervention, it is very likely to turn into serious psychological obstacles.

In addition to issuing the Guidelines, the Civil Aviation Department has also started the EAP (Employee Assistance Program) Employee Assistance Program (EAP) Employee Assistance Program. Employee Assistance Professional Standards will be introduced into the pilot training system, which will systematically train pilots and management personnel, and master the basics of psychological counseling and guidance for pilot's skill.

This professional team includes not only the internal personnel of the pilot management system but also a group of psychologists from outside the flight agency. Whoever does this caring work should receive professional training; otherwise, psychological intervention may become psychological interference.

4. Psychological Quality Training and Improvement of Three Helicopter Pilots

4.1 Good talent base and highly focused training

"Talent" is the general term of a person's ability. Ability is a complex structure of personality. Ability is contained in personality. It is based on the form of talent and is determined by education. Ability is not developed by itself but gradually cultivated and perfected through perseverance and tenacious efforts. It's hard to imagine that a person with a very poor aptitude can successfully pursue the career of helicopter pilots. Different occupations have different requirements for people's attention quality. Some occupations require a high degree of concentration, while others require a good distribution of attention. Others require a rapid shift of attention or a high degree of stability over a long period of time. Flight activities require not only wide attention distribution, fast transfer, wide range, but also high stability, but also a more comprehensive and coordinated combination of these qualities.

4.2 Positive Tendency and Interest Cultivation for Occupation

Interest is the motive force for a person to pursue a certain cause, which involves the issue of "motivation level". The difficulty and particularity of mastering flight technology have raised the problem of the initiative tendency of personal wisdom more prominently than other professions. Flying a helicopter is absolutely not allowed to be negligent. Without mobilizing all our capabilities, we will not be able to accomplish any flying tasks. Therefore, any inaccurate or incorrect maneuver may lead to flight accidents. Therefore, only by loving and having a strong desire for a career, can we have the motivation to persevere in the cause of flying and become a qualified helicopter pilot?

4.3 Emotional Stability and Anti-interference Ability Training to Improve

The flight is a kind of aerial operation with a certain danger. As the saying goes, "three feet from the ground, insecurity is absolute, and security is relative." What's more, the flight is based on a helicopter, which moves in the three-dimensional direction in the air. Therefore, whenever the helicopter rises from the ground, it will force the pilots' nerve system to be in a high state of tension. Therefore, high nervous and mental tension is one of the most important characteristics of flight labor. Emotional stability is an effective ability to withstand high levels of mental stress, and it is also a powerful response to sudden changes in the air environment and even endangers life safety. Only when the mood is stable, can we keep our fears constant, calm, courageous and careful, and be busy without the disorder.

Strong self-confidence is the basis of emotional stability. A person who lacks self-confidence must be in a state of panic and confusion when he encounters danger. What I want to mention here is that emotional stability and insensitivity are two distinct psychological qualities. On the surface, both of them are "constant in

surprise" in the face of danger, but they are fundamentally different from each other. The former is a quick perception, accurate judgment, decisive handling of strong interference factors, and the latter is a blunt perception, no response, and ultimately a big mistake, which is the enemy of flight safety.

5. Conclusions

Taking landing as an example, landing under normal conditions requires pilots to have very complex perceptual and sensory-motor skills, and at the same time requires pilots to have excellent attention quality. In this skill structure, there is the vision, of course, altitude and speed, sense of ontology and acceleration, and on the basis of synthesizing the acquired information. Manipulate the pitch bar, the periodic pitch bar, and the rudder to complete the strictly specified actions in a very short time. According to statistics, from four turns to landing, in a short minute, helicopter pilots' heads, eyes, hands, and feet need to do more than 100 actions. At the same time, every action should be prompt, accurate and coordinated, and no mistakes should be made. Because any error will directly endanger flight safety, pilots are required to see six ways, listen to all directions, be bold and careful, and not panic when things happen.

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