

EMERGING TRENDS OF MENTAL HEALTH IN AVIATION: A PARADIGM SHIFT

Abstract

Mental health is a condition of mental wellness that helps people manage life's stressors, recognize their potential, learn, and function successfully. It is a crucial element of health and well-being that supports both our individual and group capacities to make decisions, form connections and influence the world in which we live. A fundamental human right is the right to good mental health, additionally, it is essential for socioeconomic, communal, and personal development. Mental health has been stigmatized and underrated in civil aviation. Pilots may feel that visiting counsellor/psychologist may affect their flying career. Pilots have tough and stressful jobs, and the aviation sector is increasingly becoming aware of this fact and has started paying more attention to mental health issues. Ensuring the mental health of aviation personnel, such as pilots, air traffic controllers, and maintenance staff, is crucial to maintaining a safe and effective aviation system. Airline pilots frequently experience mental health issues, and seeking care may significantly impair their ability to perform their jobs. Understanding that mental health is a dynamic spectrum and that many pilots might benefit from speaking with a qualified mental health professional at some time in their careers could keep pilots flying healthily while also enhancing system safety. By spreading awareness of the issue their pilots face and advocating for solutions, pilot unions and airlines should support this initiative. In recent years, the aviation industry has made investments to reduce the stigma around mental health in the aviation sector and encourage pilots to seek therapy. It's critical to understand that mental health is a complicated topic, certain people may be more susceptible than others to causes. The prevention and management of deteriorating mental health can be significantly aided by seeking professional

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mental health assistance and keeping a healthy lifestyle. People should not be afraid to ask for help and support if someone is experiencing mental health problems.

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"Mental health...is not a destination, but a process. It's about how you drive, not where you're going." -- *Noam Shpancer*

In aviation, mental health is a significant concern, both male and female pilots are prone to mental health problems. After the Germanwings catastrophe in 2015, which the copilot of the aircraft deliberately caused, poor mental health issues have drawn increasing attention.^[45] Although there is some information on mental health in the aviation industry, efforts are being made to compile pertinent data and offer improved treatments.

Pilots have tough and stressful jobs, and the aviation sector is increasingly becoming aware of this fact and has started paying more attention to mental health issues. A fluctuating circadian rhythm, high occupational expectations, and a lack of social support at home are all contributory factors for poor mental health.^[23]

Although there is a paucity of information about mental health in aviation, experts and airlines have been aware of these problems. In aviation, mental health is treated with a macho and dejected mentality. It should be noted that although pilots receive a lot of attention when discussing mental health in the aviation industry, other aviation professionals are also affected.^[20] As the strains of the profession mount over the course of a pilot's career, the prevalence of mental illness becomes an even bigger problem.^[43,44] According to some studies pilots frequently deal with weariness because of their demanding work schedules, prolonged absences from home and erratic schedules.^[22]

I. MENTAL HEALTH

According to the Public Health Agency of Canada (2020), mental health.^[51] is the capacity of an individual to feel, think, and behave in ways that improve their quality of life while respecting their own personal, social, and cultural boundaries.^[26] Cognitive, perceptual, and behavioral processes are all impacted by mental health, which also includes emotional, psychological, and social well-being.^[53] Additionally, it affects how people cope with stress, interact with others, and make decisions. Subjective well-being perceived self-efficacy, autonomy, competence, generational reliance, trauma, and self-actualization of one's intellectual and emotional potential are only a few examples of what mental health is (The World Health Report, 2001).

Mental health is a condition of mental wellness that helps people manage life's stressors, recognize their potential, learn, and function successfully and give back to their communities. It is a crucial element of health and well-being that supports both our individual and group capacities to make decisions, form connections and influence the world in which we live. A fundamental human right is the right to good mental health, additionally, it is essential for socioeconomic, communal, and personal development.

According to the Mental Health Foundation (MHF, 2008) one's thoughts and feelings about themselves and their lives define their mental health, which has an impact on how they deal with and manage adversity.^[17] One's ability to operate, take advantage of opportunities, and engage fully with family, friends, the workplace, community, and peers is considered as being impacted by one's mental health. Physical and mental health are closely related since they both have direct and indirect effects on one another.^[25] Thus, it is conceivable to argue that a person's mental health is a state of equilibrium in which they are at peace with

themselves, able to interact with others in a productive manner and capable of taking care of both their fundamental and higher-functioning needs. Positive functioning entails handling change, interpersonal interactions, and emotions in a healthy way.

More than the absence of mental diseases defines mental wellness. It is experienced differently from person to person along a complex continuum, with varied levels of difficulty and distress as well as potentially very different social and clinical effects. There are several mental states connected to considerable distress, functional disability, or a risk of self-harm, including mental disorders and psychosocial disabilities.^[27] Lower levels of mental well-being are more likely to be experienced by those with mental health issues.

II. CASE STUDIES OF AVIATION ACCIDENTS DUE TO POOR MENTAL HEALTH

1. **Case Study 1:** In a report published in 2018, Nepali investigators concluded that the pilot's "severe mental stress" and unpredictable behavior were to blame for the March crash of US-Bangala Flight 211 at Kathmandu's Tribhuvan International Airport (KTM).^[49] The flight's captain, Captain Abid Sultan, was suffering from significant mental stress and worry, which caused him to make mistakes during the flight and finally resulted in the horrific accident that killed 51 persons on board, according to the official investigation conducted by the Nepali government. According to the study, Sultan was temporarily relieved of his flying responsibilities while serving in the Bangladeshi Air Force in 2002 because of depressive symptoms, but he was later reinstated following another mental assessment. In the three years that Sultan worked for the airline, no symptoms were mentioned in any of his medical records.
2. **Case Study 2:** On 24 Mar 15, Germanwings flight 9525 crashed into a mountain side.^[6] The crash was deliberately caused by Andreas Lubitz, the co-pilot leading to death of all 150 onboard including 6 crew. Andreas Lubitz had been treated for suicidal tendencies and declared unfit to work by his doctor.^[38] Lubitz did not give this information to his airline information and reported for duty. During flight, when the captain was out of the cockpit, Lubitz locked the door and flew the aircraft into a mountain. The examination into Lubitz revealed that he had received therapy for suicidal tendencies before receiving his training as a commercial pilot. He had also been temporarily denied a US pilot's license due to his psychotic depressive treatments. Lubitz had seen more than 40 doctors and had been frequently unable to go asleep for years due to what he thought were eyesight issues; he feared he was going blind. He started researching online because he was worried that going blind might result in him losing his pilot's license.
3. **Case Study 3:** Chris Daniel, a 29-year-old U.S. Airline Captain committed suicide in June 2022. Although he had a stellar flying record, a wife and two beautiful children, he committed suicide because he never sought treatment for his mental health problems. Even while we think pilots who commit suicide are rather uncommon, these extreme instances are the main reason we need to bring about change.

The safety culture in aviation needs to change such that mental health care services are viewed as a sign of wellness and prevention rather than danger and sickness. This can be done by using appropriate monitoring and reevaluation.^[31,33] This change will

also enhance safety and make flying safer for not only pilots but also the several million passengers who rely on the aviation system every day.

III. AEROSPACE SAFETY AND MENTAL HEALTH

Ensuring the mental health of aviation personnel, such as pilots, air traffic controllers, and maintenance staff, is crucial to maintaining a safe and effective aviation system. There are some key points regarding the relationship between aerospace safety and mental health.

1. **Pilot Mental Health:** Due to their responsibility for the safe operation of aircraft and the lives of passengers and crew, pilots' mental health is of the utmost significance. Problems with mental health, such as stress, anxiety, depression, or other difficulties, can affect a pilot's performance, cognition, ability to make decisions and reaction times.
2. **Safety Reporting Culture:** For aircraft safety, a culture of open reporting is essential. Pilots and other aviation employees must be able to raise any concerns if they have about their own or their coworkers' mental health without fear of repercussions.
3. **Psychological Assessments:** Psychological tests are frequently administered to pilots and air traffic controllers as part of the licensing and recertification procedures. These evaluations assist in finding any potential mental health problems that would limit their ability to perform in safety-critical professions.
4. **Support and Resources:** To encourage employees' mental health, aviation firms should offer assistance and services. These covers having access to counseling, mental health education initiatives and peer support groups.
5. **Fatigue Management:** Safety can be jeopardized by fatigue and mental health problems. To ensure that employees remain well-rested and attentive while on duty, the aerospace industry has stringent standards and fatigue management programs.
6. **Training and Awareness:** Training courses can assist aviation professionals in identifying warning signals of mental health problems in pilots and their coworkers. Campaigns for awareness can also lessen the stigma associated with mental health, enticing people to get treatment when they need it.
7. **Crisis Management:** Crisis management procedures must be in place for aviation organizations to handle personnel support needs and mental health emergencies.
8. **Impact on Decision-Making:** In aviation, mental health can affect how one makes decisions, solves problems, and perceives the environment. For the best performance in positions that require safety, maintaining excellent mental health is essential.
9. **Long-Term Effects:** Aerospace personnel mental health should be considered for both their long-term career sustainability and immediate safety. A lack of skilled workers might result from attrition and ongoing stress.

10. Post-Traumatic Stress Disorder (PTSD): People involved in aviation accidents or events may experience severe emotional distress. People who have experienced traumatizing events should have access to adequate psychological support.

Aviation industry should understand the significance of mental health by constantly trying to enhance safety precautions, support, and awareness.^[52] Aviation personnel can be better prepared to handle the demands of their jobs by actively addressing mental health and promoting a culture of wellbeing, which will result in a safer and more effective aviation system.

IV. FACTORS THAT IMPACT PILOTS MENTAL AND PHYSICAL HEALTH

Airline pilots frequently experience mental health issues, and seeking care may significantly impair their ability to perform their jobs. When a new symptom or condition is reported to the Directorate General of Civil Aviation (DGCA), a pilot runs the danger of losing their ability to work and fly, usually for a brief period. To keep their flying status active, pilots must adhere to certain medical standards. Particularly in the case of mental health issues. If a pilot report receiving regular talk therapy for even minor anxiety or depression, the DGCA prohibits them from operating aircraft. Depending on the premise that they pose an intolerable risk to safety, this might endure for months or even years. Pilots are really one of a very small number of occupations that need disclosure of any contact with the healthcare system, including visits for mental health.

While it makes sense to ground a pilot who is experiencing difficulties, the existing system frequently misses the dynamic and frequently situational character of mental health symptoms, which discourages pilots from seeking help. The costs of further medical evaluations that the DGCA requires frequently fall on the pilot and time away from the job may have severe consequences like income loss and the necessity for repeat training. All these factors add up to a population of pilots operating the fleet who endure their misery in silence out of fear of receiving the support they require. Changes must be made to the system that discourages pilots from caring for their mental health as well as the definition of obtaining mental health assistance in the aviation industry.

This issue is projected to become more challenging due to the aviation industry's rising need for pilots and the world's COVID epidemic. In the coming years, pilots are expected to do more and make longer and more frequent journeys to keep up with passenger demand, as their pay has increased. This comes into play with other airline occupations like maintenance and administrative employees experiencing severe staffing shortages, adding additional stress to a system already functioning at its limit. A larger need for mental health care services may result from pilots spending more time away from their loved ones because of increased demand. In other words, the need for mental health services for pilots is only going to increase in the future.

Although it would initially appear like expanding the pool of pilots will help, more pilots won't be able to address the system's current problems. The number of flight training programs is rising, and some airlines are even going so far as to start their own training facilities. A younger and more diverse group of student pilots are filling the expanding class sizes, but they might not be as willing to quietly endure as their forebears were. Emerging data indicates that the present pilots' willingness to forgo health insurance in exchange for job

security (who are still primarily in the 40 to 60 age bracket) may not hold true for the following generation.

The lack of pilots may become even more acute as a new crop of Gen Z airline pilots, who are more willing to take time off from flying to seek mental health care, enters the workforce. It should also prompt industry to reconsider what it means for an airline pilot to be mentally healthy and what treatments they should be able to access while still operating the fleet. Meaningful change in the aviation industry needs to start with safety. It goes without saying that a pilot who has a serious mental health issue shouldn't be flying. Pilots with minor symptoms, however, have a chance. These high-achieving individuals may be dealing with one of life's common stressors, such as a divorce, a death in the family or even just the ongoing stress of their jobs.

The DGCA's policy needs to be changed to allow pilots with minor symptoms to get professional, routine and, if necessary, protracted talk therapy without losing their medical certification. A modification in the policies to include therapy to stop symptom worsening and routine pilot evaluations by a qualified mental health specialist would have significant positive effects for personnel on both sides of the flight deck door. Understanding that mental health is a dynamic spectrum and that many pilots might benefit from speaking with a qualified mental health professional at some time in their careers could keep pilots flying healthily while also enhancing system safety. By spreading awareness of the issue their pilots face and advocating for solutions, pilot unions and airlines should support this initiative.

According to Singleton et al. (2001), at least one in four persons will experience a mental health issue at some point in their lives.^[11] Of these, 20% will present in primary care settings. Mental illness is more common in some situations, according to the National Service Framework for Mental Health (Department of Health, 1999), stress, substance misuse, social marginalization, adverse early experiences, and unemployment are influencing elements that were stated at the beginning of this chapter. In this context, incidence refers to the number of new cases of a disorder that develop within a population, during a particular time, whereas prevalence refers to the proportion of persons who have a certain disorder within a given community. While neurotic disorders account for 1 in 6 cases of mental disease, major mental illness affects 1 to 2 persons out of every 100. The challenge of managing the public's mental health is a very real one. The World Health Organization (WHO) had predicted that deaths due to mental health illnesses would overtake natural causes of death by the year 2020. Although numerous, the causes of the rise in mental disease are yet unknown. There have been some findings drawn regarding the nature of modern mental disease (Freshwater, 2003). According to Tod Sloan (1996), contentment appears to be hard to come by. He makes the case, like Mirowsky (1989), that this is the price we pay for living in the so-called contemporary lifestyle. Emotional dissonance affects most people to some extent.

In a 2017, in a review published by the British Psychological Society, it was determined that several factors, including strenuous efforts for licensure and recruitment, such as extensive testing, medical certifications, simulator test flights, technical exams, safety and emergency procedure protocol and even more to maintain their status, could have an impact on a pilot's mental and physical health.^[36]

Small work areas and lengthy shifts in the cockpit can be difficult, especially when combined with other factors like noise, smoky conditions, low oxygen levels, high altitudes, and others. It is true that jet lag, early starts and finishes, long hours and regularly shifting schedules can make a person more vulnerable to both physical and mental illnesses. For pilots, job insecurity is frequently a top concern. The economy and other low-cost carriers make this industry riskier than it used to be. As a pilot must make choices to attempt and protect their safety and the safety of others, terrorist worries have also grown increasingly prevalent.

It's incredibly challenging for pilots to keep up personal ties because of the lengthy hours and distance traveled. Arguments with family members over these requirements for a career can cause additional mental distress, which frequently results in mental diseases like melancholy and anxiety. Excessive demands may have a negative impact on a pilot's physical and mental health, jeopardizing their quality of life as well as their employment. If you've been seeing symptoms of a mental or physical condition, get the assistance you require right away.

In recent years, the aviation industry has made investments to reduce the stigma around mental health in the aviation sector and encourage pilots to seek therapy. This includes a) Increasing medical examiners' mental health training; b) Supporting industry-wide research and clinical studies on pilot mental health; c) Hiring more mental health professionals to increase in-house expertise and shorten wait times for decisions regarding return to flight; d) Starting clinical research to address the frequency of cognitive testing in airmen taking antidepressants. In India, the civil aviation regulator DGCA has recently issued a Civil Aviation Requirement, making it mandatory for airlines to have a structured psychological health program for their employees.

The history of mental illness, according to Tudor (1996), is one of exclusion, division, distinction, and otherness. It is common knowledge that the stigma and prejudice linked to mental health conditions worsens this feeling of exclusion, loneliness, and distress (Mental Health Foundation, 2000). Attitudes toward people with mental health issues are frequently ambiguous and conflicting, according to the Department of Health publication 'Attitudes to Mental Illness' from 2003. Stereotyping is pervasive and frequently results in prejudice manifested as intolerance and ignorance, which is the idea that all members of a particular group fit into an unjustifiably fixed mental image. The preconceptions in the media about people with mental illness who are sometimes presented as violent criminals add to this problem. Counselors and psychotherapists contribute significantly to challenging the popular myths about mental and psychiatric diseases.

However, they could unintentionally keep spreading the false and harmful information that leads to labeling, stigmatization, and the consequent isolation. This can be because of a simple ignorance of the relationship between mental disease and their normal therapeutic practice. The chapters that follow are committed to promoting a deeper understanding of the larger influencing factors governing mental health so that counselors and other professionals working in psychological therapies can offer clients in mental distress a more comprehensive service.

V. SUICIDE IN PILOTS

The sensitive and complex subject of pilot suicide has been recorded in the past, although being relatively uncommon. People from many areas of life, including pilots, can be affected by suicide, which is a devastating and intensely personal issue. Airlines and aviation authorities have put in place stringent rules and screening processes to make sure that pilots are physically and psychologically capable of carrying out their jobs safely. These steps entail psychiatric assessments, physical exams, and continual mental health monitoring of pilots.

The aviation sector has put more emphasis on the physical and mental health of pilots recently. This is largely in response to widely reported events involving pilots who were struggling with their mental health. There have been initiatives to lessen the stigma attached to obtaining mental health treatment and to motivate pilots to speak out if they are having problems. To help pilots who might be struggling with stress, anxiety, or other mental health issues. The aviation sector has also introduced peer support programs and mental health resources. It's crucial to keep in mind that most pilots are committed professionals who adhere to strict safety requirements and take their duties seriously. Even though events involving mental health issues can be extremely upsetting, it's crucial to approach the situation sympathetically and supportively rather than stigmatizing or stereotyping pilots. There are numerous countries where people can call suicide prevention hotlines for urgent assistance and support.

Suicide by pilot refers to an incident involving aviation in which a pilot intentionally crashes or attempts to crash an aircraft as a suicide act, with or without the intent to injure other individuals on board or on the ground. It might qualify as a form of murder-suicide if other people are also killed. It has been identified as the root cause in certain crashes of commercial aircraft and is thought to have been a factor in others. For accident investigators, figuring out why a pilot purposefully turned off a recorder or did something else to obstruct an investigation can be difficult.^[18,19] Consequently, it may be challenging to prove pilot suicide incontrovertibly.

Investigators don't label incidents involving airplanes as suicides unless there is strong proof that the pilot planned to die by suicide. This proof may take the form of suicide notes, previous suicide attempts, overt threats of suicide or a proven history of mental illness. To determine if the suicide was a terrorist act, police may occasionally work with terrorism experts to investigate possible ties to extremist organizations. There are some incidents where the pilot intentionally crashed.^[47] On 29 Nov 2013 in LAM Mozambique Airlines Flight 470, pilot intentionally crashed the aircraft. The co-pilot was locked out of the cockpit by him, according to the voice recorder.^[46]

Timofei Shovkunov crashed an Aeroflot Antonov An-2 into his own Voroshilovgrad apartment on 27 March 1972. He was the lone victim in this crash. In other incident, on 26 September 1976, Vladimir Serkov attempted to fly his Antonov An-2 aircraft into the Novosibirsk apartment of his ex-wife's parents while she and their young boy were on a visit; four people were killed (his wife survived).^[34] In another instance, an angry former Connellan Airways (Connair) employee crashed a Beechcraft Baron into the Connair complex at the Alice Springs Airport in the Northern Territory of Australia on 5 January 1977.^[2,3]

22 August 1979, a Satena Hawker-Siddeley HS-748 was stolen and crashed into a Bogota suburb by a 23-year-old airplane mechanic working at Bogota El Dorado Airport, killing 3.^[4,35,42] Brazilian pilot Mauro Milhomem realized his wife had cheated on him on 1 June 1980, and following a fight with his wife and mother-in-law, he attempted to crash his Embraer EMB 721 Sertanejo, which was also carrying four passengers, into a hotel owned by a family relative. Instead of hitting the hotel as planned, he struck several additional targets before crashing the plane into another structure. A few days later, his wife murdered herself. There was a total of seven fatalities and four injuries.^[48]

In another case, on 15 September 1982, student pilot Philip Henryk Wozniak hijacked a SOCATA Tobago and committed suicide by purposefully flying into Bankstown Airport in the City of Bankstown, New South Wales, Australia. Additionally, two airplanes on the ground were destroyed.^[5,12,15,10] On 23 March 1994, Bob Richards was dealing with personal issues including his marriage. His Piper Cherokee single-engine aircraft intentionally crashed to the ground. He was the sole death on board the aircraft.^[7] A Russian air force engineer stole an Antonov An-26 on 13 July 1994, at the Kubinka air base outside of Moscow. He circled the plane till its fuel ran out and it crashed. Flight 630 of Royal Air Maroc was deliberately crashed on 21 August 1994.^[37]

In another case, on 6 September 1998, Flight instructor at Embry-Riddle Aeronautical University in Daytona Beach, Florida, purposely crashed while off duty.^[1] At Sir Seretse Khama International Airport in Gaborone, Botswana, on 11 October 1999, a pilot hijacked an Air Botswana plane before crashing it into a group of parked planes. This destroyed both the plane and the parked planes, effectively crippling the airline because they lost all their operational planes.^[14]

Phillip Daniel Rogers intentionally crashed his single-engine Beechcraft Bonanza light plane onto Stone Mountain's southern face on 16 September 2003, in Atlanta, Georgia, the United States.^[16] On 22 July 2005, a 39-year-old pilot intentionally brought his own little plane, a Platzer Kiebitz, down in a field in front of Berlin's Reichstag.^[21] On 18 February 2010, in Austin, Texas, the United States, Andrew Joseph Stack III intentionally crashed his single-engine Piper Dakota light aircraft into Building I of the Echelon complex, which housed the IRS headquarters.^[39] In addition, in 1976, a movie actor Mitsuyasu Maeno attempted a Kamikaze attack against right-wing political figure Yoshio Kodama in Tokyo using a rented Piper PA-28 Cherokee and Kodama survived unhurt.^[8]

Other case indicated, on 17 July 2012, a Canadair CRJ200ER regional jet was stolen at St. George Regional Airport in Utah by a suspended SkyWest Airlines pilot who is being sought in connection with the fatal stabbing of a woman in his house. As it departed the gate, the plane crashed into the terminal building, and the pilot sped up to approach the parking lot. Then, while still inside the plane, he shot himself to death.^[30,40,41] On 22 July 2013, the pilot departed from Shannon Airport in Fredericksburg, Virginia, in a Cessna 172M.^[28] The pilot's fiancée called the police and reported that she and the pilot had argued before the flight and that the pilot had planned to commit suicide. Northwest of the runway, the plane entered a steep descent and crashed. The pilot deliberately brought the aircraft down on 29 November 2013.

One more case disclosed that on 10 August 2018, Richard Russell, a ground support worker for Horizon Air, departed without permission from Sea-Tac International Airport in a Bombardier Dash 8 Q400 and engaged in aerobatic acrobatics over the city and Puget Sound while being followed by fighter fighters.^[9,13,50] Russell intentionally crashed the aircraft into Ketron Island in the South Puget Sound, despite the air traffic controller's best efforts to persuade him to make a safe landing. 10 September 2021, an airplane was crashed into a field not far from Ashford, UK, by a man who had been given three months to live after receiving a fatal cancer diagnosis.^[32]

VI. REASONS FOR PILOTS' MENTAL HEALTH TO GET WORSE

Multiple factors can contribute to worsening mental health and multiple factors frequently combine to cause it. Some significant factors that may be involved with deteriorating mental health include:

1. **Stress:** Long-term high levels of chronic stress, whether caused by work, relationships, or other life events, can have a negative impact on mental health.
2. **Trauma:** Going through traumatic experiences, including being physically or emotionally abused, having an accident, or going through a natural disaster can result in mental health problems. Aviation professionals may see or experience distressing occurrences like collisions or near misses. Post-traumatic stress disorder (PTSD), which is characterized by intrusive memories, emotional anguish and anxiety may be brought on by these events.
3. **Isolation and Loneliness:** Over the long term, social isolation and loneliness can have a detrimental effect on one's mental health. Isolation and loneliness can result from frequent travel and extended separation from loved ones. A person's mental health may be impacted by a lack of social support systems and difficulties sustaining close relationships.
4. **Financial Difficulties:** Having to deal with money issues and uncertainties can be extremely stressful and can cause anxiety.
5. **Genetics and Family History:** A family history of mental illness can raise the risk and some people may be genetically predisposed to certain mental health issues.
6. **Physical Health Issues:** Both chronic physical and mental health disorders can have an impact on one another.
7. **Substance Abuse:** Abusing drugs or alcohol can aggravate pre-existing mental health conditions or create new ones.
8. **Workload and Burnout:** Stress and mental health issues can be brought on by high-stress work situations, an excessive workload and burnout.
9. **Unhealthy Lifestyle Habits:** Mental health can be significantly impacted by poor food, insufficient exercise, and inadequate sleep.

10. **Major Life Changes:** Moving, getting divorced, losing a loved one, losing your career and other major life changes can be difficult to handle and have an impact on your mental health.
11. **Environmental Factors:** Living in a noisy, polluted, or stressful environment might influence one's mental health.
12. **Media and social media:** Mental health may be impacted by media or social media exposure to bad or distressing content.
13. **Lack of Access to Mental Health Support:** People may be unable to receive the necessary assistance due to a lack of mental health resources and services. In aviation, mental health has received negative connotation and is undervalued. The underreporting and under management of mental health issues are caused by a lack of access to mental health resources, inadequate training, and weak support networks.

It's critical to understand that mental health is a complicated topic, certain people may be more susceptible than others to causes. The prevention and management of deteriorating mental health can be significantly aided by seeking professional mental health assistance and keeping a healthy lifestyle. People should not be afraid to ask for help and support if someone is experiencing mental health problems.^[29] A comprehensive strategy is needed to address these issues, one that emphasizes the wellbeing of aviation workers above all else. This strategy should involve raising awareness of mental health issues, putting supportive workplace practices in place, facilitating access to mental health resources and more.^[24]

VII. STRATEGIES TO ENHANCE MENTAL HEALTH AMONG PILOTS

The following tactics can be used by employees in the aviation business to maintain a work-life balance and take care of their mental health:

1. **Establish Distinct Boundaries:** Define specific times for rest, relaxation, and personal activities to establish clear boundaries between work and personal life. Keep work-related chores and stress out of personal time. Though regulations defining minimum rest periods etc. are in place, intangibles like administrative arrangements etc. must also be catered to while deciding the duty and rest periods.
2. **Put Self-Care First:** Take pleasure in self-care activities like consistent exercise, enough sleep, and a balanced diet. According to research, mental and physical health are favorably correlated.
3. **Stress-Management Strategies:** Acquire knowledge about and put stress-management strategies, such as deep breathing exercises, mindfulness, and meditation into practice. These methods have been demonstrated to be successful in lowering stress and fostering mental health.
4. **Effective Communication:** Inform your superiors and coworkers about the workload, stress levels and personal requirements. Effective communication can support managing work-related demands and result in a fair workload distribution.

5. **Utilization of Mental Health Resources:** Make use of the mental health resources provided by aviation organizations, such as counseling services or employee help programs. These providers offer private help and direction.
6. **Interpersonal Relationship:** Encourage relationships with coworkers, friends, and family to build a network of support. Stress can be reduced, and emotional support can be obtained by participating in social activities and upholding healthy relationships.

These tactics can help aviation sector workers better balance their professional and personal lives, manage stress, and give their mental health the attention it deserves, which will eventually improve their overall wellbeing and job satisfaction. For the welfare of aviation professionals and the safety of air travel, the aviation sector must give mental health a priority. It is crucial to take preventative actions to address mental health issues because the profession is demanding and has its own set of difficulties and anxieties. The aviation sector can develop a healthier and more resilient workforce, ensuring safer skies for all, by putting into practice initiatives like encouraging work-life balance, offering support systems, raising awareness, and fostering a culture of mental well-being.

VIII. TELEMENTAL HEALTH IN AVIATION

The DGCA has advised that organizations subject to secrecy requirements integrate mental health promotion within their safety management systems. The provision of mental health services remotely via telecommunications technology is referred to as telemental health, sometimes known as telepsychiatry or teletherapy. With this strategy, mental health providers can communicate with pilots over the phone, video call, text message or other digital means. Due to its ability to overcome obstacles to conventional in-person mental health care, such as stigma, schedule conflicts, geographic distance, and mobility challenges, telemental health has grown significantly in popularity and recognition. The following are the primary facets of telemental health:

1. **Distant Therapy:** Through phone calls or video conferencing software, mental health experts hold therapy sessions with pilots. These sessions can include a variety of therapeutic modalities, including cognitive-behavioral therapy (CBT), psychoanalysis, mindfulness-based therapy, and others.
2. **Assessment and Diagnosis:** Various diagnostic tools, questionnaires and interviews conducted over video calls or online platforms can be used to conduct mental health examinations and diagnoses remotely.
3. **Medication Management:** Through telemedicine platforms, psychiatrists and other medical specialists can offer medication management and consultations, ensuring that patients receive the right prescriptions and oversight.
4. **Crisis Intervention:** In times of crisis, telemental health services can be quite helpful since mental health specialists can provide instant assistance to people in need and aid in managing serious emotional difficulties.

5. **Approachability:** Telemental health makes mental health care more accessible to people who reside in rural locations, have restricted mobility or have trouble getting around. It may also be an option for those who would rather receive therapy in the quiet of their own homes.
6. **Tractability:** Increased scheduling flexibility with telemental health services can be advantageous to both clients/patients and mental health specialists. Better treatment plan adherence may result from this.
7. **Ethical and Legal Considerations:** Telemental health services must abide by ethical standards and laws that are relevant to mental health care in the area in which the services are offered. Platforms for digital communication must be secure, private, and confidential.
8. **Technology Requirements:** For successful telemental health sessions, you'll need dependable internet connectivity, the right tools, including PCs and/or cellphones and a secluded, peaceful setting.

The fact that telemental health has drawbacks despite its many benefits should not be overlooked. Some people might not feel as comfortable using digital platforms for self-expression and it might be harder to undertake some sorts of therapy remotely. Aside from that, not all mental health issues can be successfully treated with telemental health alone. Like with any kind of therapy, telemental health's success depends on the level of trust between the client/patient and the mental health expert as well as the requirements of the person seeking assistance.

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