Alarming Consequences of Not Employing Authorized Medical Examiners in Authorized Flight Training Organizations.

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ABSTRACT

While there seem too many controversial subjects and no apparent developments in aviation training in Turkey, pilot training ignores some new apprehensions. A survey of 87 pilot candidates at our aviation institution finds adverse mental and physical conditions being self-medicated and unexamined. Pilot training organizations should be legally required to employ authorized medical examiners to prevent accidents made by candidates flying under the influence.

INTRODUCTION

A survey at our institution studied 87 pilot candidates for more than 400 flight hours (240 sorties). The candidates were questioned before, during, and after the flights and were observed for their mental and physical performance. When we looked closely at the incoming data, we realized the study needed to be both refined and broadened to include a larger population. Although that study has not yet been published, data were shared in the 4th National Congress of Aviation Medicine (Beköz et al., 2018). Following this revealing of data, we feel responsible to act and inform both authorities and training organizations of future hazards. The study will surely enlighten the entire situation with numbers and details soon. Nevertheless, we must in the meantime expose the dormant killer as revealed by facts in the study and legal future situations that must be considered.

A flying aircraft has two basic ingredients: human and machine. While superior attention is paid to the machine component, the human side seems to be neglected by most pilot training organizations. Although organizations must understand the machines they use, candidates still stand helplessly uneducated about what in fact they are.

The Complicated Life of a Pilot Candidate

Pilots all around the world may lead complicated lifestyles, yet pilot candidates are not pilots and their complications are vastly different. First, pilot candidates do not earn their living by flying but by "waste." Second, they also must earn a living or keep their studentship in (mostly) universities. Many of them work, care for a family, and attend a flight school in a different location. There are of course ones whose struggle is merely the flight school and its program, which puts them in a room in front of a computer screen, waiting for inane flight hours and consuming any edible matter under a load of stress. While bad weather conditions mean a good off day for many pilots, it means wasted time for the candidates and falling more behind the overdue bills. Lower personal comfort and bad nutrition cause too many health

issues to be concealed. There are many other collateral conditions that contribute to this catastrophic nature of pilot candidates.

Adverse conditions concealed by pilot candidates

Resilient physical and mental well-being is of course a virtue, expected in every single pilot candidate, but it is a virtue anticipated to help in actual flight. If a pilot candidate is simply wasting his or her energy resisting against the conditions of the training, this is bound to have consequences—alarming ones.

Observable adverse conditions of pilot candidates are mentioned above; however, most pilot candidates suffer from physical and mental conditions that they keep concealed. Here are the most common ones (Beköz et al., 2018):

- When they come down with a severe case of upper respiratory tract infection, they use nonprescription medicine containing pseudoephedrine, intranasal corticosteroids, antihistamines, codeine, nonsteroidal pain killers, etc., deciding on their own dosages.
- If the pharmaceutical agent is prescribed, it is not submitted. Ever.
- Some candidates take night shifts at their work and in the morning catch the training flights. The training organization does not know of this nor is informed.
- Candidates with severe sleeping issues admit that they consume too much caffeine and/or energy drinks to look sober.
- Alcohol consumption is not rare, and some unknown chemicals are used to conceal hangover.
- Candidates who suffer or think they will suffer motion sickness regularly use antiemetics, even for considerably long periods.
- Some candidates admit the use of homemade “medicine” to be resistant.
- The use of illegal drugs such as cannabis or meth is unknown, but we suggest references here to take into consideration (Assessment, 2011), (Sabra R. Botch, 2008).
- There are candidates on unreported antidepressants.
- There are candidates with anorexia.
- There are candidates with severe back pain (intervertebral disc displacement).
- Seriously stressed, depressed or unhealthy candidates attempt flights.
- Dehydration is very common in female candidates, as they refuse to consume liquids especially before long flights.

This article will not discuss the adverse effects of the above-mentioned pharmaceuticals and/or chemicals as they are well known and easy to access. On the other hand, all are jeopardizing the flights as training flights happen all on human hands, with autopilot rarely involved. Candidates who use these substances may be separated into two groups: those who do not really know they are concealing their condition, and those who conceal their condition but think it is innocent. However, the theme of this paper is neither to discover a criminal nor to acquit anyone.

DISCUSSION: LEGAL PHASE

One may wonder about the instructor’s role in all of this. The answer: A candidate has a mandatory 220 hours to be licensed, nearly half of which should be performed solo by him or herself[1]. Yet, if still there are a few accidents/incidents reported, it is because all training organizations plant a safety pilot on board these “solo” flights, which we believe goes against the nature of pilot training. This also means that flight training organizations are very aware of what may happen up there. If not, they are suspicious of their own training program and its quality. This cannot be true as they are well inspected by the authorities. Aren’t they?

Speaking of authorized training organizations (ATOs), they surely fulfill the needs of the appointed training by all means. The candidates are all examined and certified by authorized medical examiners (AMEs) in a certified and authorized hospital before they are enrolled. This examination has periods. The shortest is a year.

[1] This is called pilot in command (PIC) flight. Hereafter used as PIC.

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Air transportation companies employ such certified AMEs and perform some preflight checks. However, there is not a single ATO that has ever employed an AME.

ATOs are safe and have no legal responsibility of a candidate flying under the influence or side effect of any substance. Instructors are neither certified nor experienced to detect and decide on such matters. If an instructor refuses to fly with a candidate who has used medicine for a cold, that instructor can lose his job, and the candidate can sue him or the ATO, etc. We do not know if an instructor can refuse a flight because the candidate looks dehydrated. This is not an instructor's job and should not be. The only person who can decide on this medical matter is an AME employed expressly to deal with such circumstances.

Of course, any accident that causes injury or death is followed by a legal investigation, in which a "fault" is pursued, and when it is captured, someone is found responsible for it. In the matter of candidate pilots, this fault may not be chased legally. ATOs or instructors cannot be found responsible since the national legislation has not defined needed steps yet. If a candidate is on antidepressants and flying, this cannot be verified until the next authorized examination. If severe fatigue is involved, it cannot be determined by bystanders and no one can accuse those bystanders of not being aware.

Nevertheless, can candidates be expected to know what not to do or take? Can they be found at fault if an unwanted situation occurs independent of their piloting skills?

Facts of "Human Performance" Lessons

As there obviously are two basic parts of any flight, the ground lessons (theoretical phase of training) have been organized accordingly, and the human part has been summarized in a series of lessons called "human performance." The theoretical phase of any pilot training actually devotes a large amount of time on human performance. The lessons have two sections: human physiology and the human factor. The most neglected part is the physiology. But the human factor aspect is another ambiguous area that is mostly regarded as falling under cockpit resource management (CRM).

When scrutinized, these lessons are mostly attempted by unskilled, nonpilot or nonphysician lecturers who are forced to fulfill the appointed course hours. Distance learning procedures make it worse. As the final questions are all easy to access on many websites, candidates prefer to memorize them, for there are not many of them and statistical results of this lesson show a big success.

When candidates are interviewed, they do not hesitate to frankly admit that these lessons deserve less attention. The "machine part" is the aspect that deserves their attention, mostly because they are young and immortal[2].

No, candidates cannot be expected to decide which substances are contraindicated with their flight environment. They are informed neither about the consequences nor about the generic names of the medicines in the first place. They only know that a generic name is good for their cold or that the fatigue they experience will pass if they just take a nap for ten minutes. The majority of antihistamines and opioid pain relievers are known to cause drowsiness (National Transportation Safety Board, 2014). However, this information is written for physicians with the experience and training necessary to interpret the guidance and make medical decisions. There is no real legal document presented to the candidates or published by the authority that lists certain drugs and medical conditions or a list of prohibited/acceptable drugs for use by candidates/pilots. The authority does not provide a similar extensive resource targeted to pilots or pilot candidates.

There will undoubtedly be legal issues soon. Flight instructors or ATOs will be accused of not being aware of the candidates' situation.

CONCLUTION

The law tries to protect the rights of people. It does not try to punish or ban. When there is a conflict it seeks resources to take over the responsibility for the sake of safety. If there is no possible designation, then it bans everything. At this point, the resource is the specialty of the

[2] It is usually not acceptable in scientific papers to pronounce such subjective propositions, but the subjectivity of this proposition, fed by a little anger, is obviously far from criticism.

flight physicians or AMEs that must be employed in ATOs. The AMEs' obligation is to detect and fix an approaching hazard. This is a fatal hazard with possible solutions. If or when precautions are not taken, the civil aviation authority will be the first accused along with the ATOs. Since there is evidence now, there is a clear safety gap identified. This means that there will be legal consequences of not fixing this gap by employing AMEs and not reevaluating the human performance lesson and its lecturers[3].

In the universe of aviation, the first and foremost "mandatory item" is that the PIC, the human who is actually flying, should be in such a physical and mental condition that no subordinate matter can interfere with his or her performance in focusing on the operational needs of the flight from its beginning to its very end.

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[3] It is ironic that we seek help from physicians while they seem to seek help from aviation (James, Otten, Poggi, Robinson, Castaneda, & Wade, November 2006).

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