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## Module/course Name

Alcohol is described to be an intoxicating substance which is very widely used as well as misused usually in the western countries. Alcohol abuse is identified as the 4th most serious health issue among members of public (Newman, 2004). Many researches have been carried out to study the relationship between occupational mishaps and alcohol consumption extensively. A substantial proportion of this research has been conducted in the aviation field to study the impact of alcohol consumption and violation on the safety performance. This paper will discuss the ethical implications of alcohol violation in the aviation industry.
Studies have identified that there has been an increasing number of detected alcohol violations in the aviation industry. According to Li et al. (2007), during the period of 1995-2002, a total of 511, 745 alcohol tests were randomly carried out and reported by the major airlines to the FAA. Out of these, it was identified that 329 carried BACs greater than 0. 04%. Prevalence rates of violation were different for people at different positions and occupations in the aviation industry. For instance, the prevalence rate for flight crews ranged from 0. 03% to 0. 19% and remained less than 0. 001 for the non-federally hired air traffic controllers (Li et al., 2007). Due to a larger proportion of population being the flight attendants and maintenance personnel, they accounted for 78% of all the detected alcohol violations identified through random testing (Li et al., 2007).
Several researches have been carried out to study the impact of alcohol consumption and violation on the performance of staff working in the aviation industry. According to Cook (1997), if the alcohol level reaches at the level between 0. 01% and 0. 03%, it can impair the outcomes of flight tasks adversely. These tasks include angular acceleration, aircraft descent and terrain separation. Cook (1997) also identified that at modest levels of alcohol that is between 0. 03% and 0. 05%, piloting skills such as vectoring airport traffic control, tracking radio signals, managing heavy workload conditions and performing linear acceleration can be impaired.
Another well researched and documented impact of alcohol is known as the positional alcohol nystagmus (Newman, 2004). This may take place 34 hours after the consumption of alcohol. It is further intensified at angular acceleration and higher altitude (Billings et al., 1991). Several aviation crashes has been implicated by positive alcohol nystagmus, hence it will remain an important concern for the safety of the flight (Billings et al., 1991). Other incidents involve pilot flight tasks performance including landing, takeoff and glide slope deviation being affected negatively and reported for pilots who had consumed alcohol 8 to 14 hours before (Cable News Network, 2002).
Another research identified that alcohol consumption might result in spatial disorientation. Spatial disorientation refers to as the ability of the pilot to effectively interpret aircraft altitude, airspeed and attitude in relation to the other points of reference (Gibb, Gray and Regan, 2012). If the disorientation is not recognized at a very early stage, it may result in loss of control of the aircraft and may have disastrous consequences including massive loss of lives. Spatial disorientation is a very common cause of fatal accidents (Gibb, Gray and Regan, 2012). According to the United States Navy, during the period of 1980 and 1989, a total of 112 aircraft accidents took place due to spatial disorientation of the crew members (Davis, Johnson and Stepanek, 2008). During the period of 1987 and 1995, a total of 291 significant helicopter accidents in the United States Army took place due to the same reason. Overall these accidents resulted in the loss of 110 lives and a monetary loss of US$468, 000, 000 (Johnson et al., 1999).
Since alcohol consumption results in the impairment of performance which might put the safety of everyone in the aircraft at risk, it is the moral responsibility of the pilot and all the staff to ensure that they perform their assigned task in the most responsible way and avoid consumption of any substance which will prevent them from achieving this (Li et al., 2007). Impairment of performance due to alcohol consumption means that it may affect the behavior of the person and a series of planned actions may not be possible due to the impairment. A pilot has the greatest responsibility to keep the safety, wellbeing and comfort of all the passengers and crew in his mind who have entrusted their lives to him (Newman, 2004). Alcohol affects the human information processing system and memory adversely which disables the person to carry out any task in the most effective manner (Newman, 2004). Hence flying an aircraft with a high BAC is a serious safety concern.
Despite of strict rules and regulations relating to the consumption of alcohol and imposition of the minimum time interval between flying and drinking, a few pilots believe that it is completely safe to fly during these times jeopardizing the safety of all the people in the aircraft. In one of the studies, a survey was carried out where half of them believed that they are safe to fly an aircraft within four hours of consuming alcohol. Alcoholism is identified as the highest ranked serious issue and airlines usually have rehabilitation programs for the impacted pilots.
Alcohol consumption and its relation with the fatal aircraft accidents have been widely discussed. Several incidents have taken place where the aircraft crashed to the reason that pilot had a high BAC level. In 1977, a Japanese Airliner crashed in Alaska and on investigating it was found that the pilot had a BAC of 0. 021% (Newman, 2004). Within the UK and US airlines, cases have been reported for pilot being found under the impact of alcohol either before, during or after the flight (ABC News, 2001). In UK, an aircraft crashed due to pilot failing to perform flight tasks and led to loss of engine power. Investigation identified that the pilot could not avoid the stall at low altitude as the performance/ability was impaired due to the impact of alcohol consumption (Newcomb and Stark, 2013). Recently, an American Eagle pilot was arrested as he failed the breathalyzer test before flying from Minneapolis to New York City. The BAC level of the pilot was 0. 08 whereas the legal limit is 0. 04 (Newcomb and Stark, 2013).
Overall, negligence on the part of pilot may lead to disastrous results. Government and airline companies recognize the importance of this issue and consider it as the most important security threat to the safety of all the people traveling in the aircraft. It is the moral responsibility of the pilot to ensure that the legal requirements and the rules regarding alcohol consumption before, during and after the flight are complied with. Believing that consumption of alcohol will not affect the performance means putting the security of everyone at risk. It is not only due to the regulatory environment that pilot must be careful and ensure that the BAC level remains under the legal limit but it is also the moral responsibility.

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