

Mental Health in Pilots Ages 19-26: What are the new pilots telling us?

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Mental Health in Pilots Ages 19-26: What are the New Pilots Telling Us?

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Embry-Riddle University
Daytona Beach, Florida



Headlines

Police: Embry-Riddle student planned mass shooting on campus Thursday

Germanwings Flight 9525: Inside the horror of the 'darkest day'

Murder-Suicides by Pilots Are Vexing Airlines as Deaths Mount

- Pilot actions a focus in China Eastern plunge killing 132
- Intentional crashes a leading cause of airline travel deaths

Chicago aviation student took own life in UND plane crash; parents hope some good can come of it



Germanwings Airbus A320 Co-pilot Andreas Lubitz had been treated for depression before the tragic crash, a review found.

EPA (2)



More Headlines



A still frame from Trevor Jacob's YouTube video, "I Crashed My Plane," showing him exiting the plane. Trevor Jacob

FAA revokes licenses of pilots in failed Red Bull plane swap

**LUNKEN ADVISES AGAINST FLYING UNDER BRIDGES
LONGTIME PILOT, AVIATION WRITER RE-EARNED PRIVATE CERTIFICATE**



Hazardous Attitude Correlation?

Correlation to:

- 1. Regulatory Violations**
- 2. Criminal Activity**

- 1. Macho**
- 2. Impulsivity**
- 3. Anti-authority**
- 4. Invulnerability**
- 5. Resignation**



Mental Health

- *A Hidden Safety and Security Threat*
- *Must be addressed effectively, productively and in a non-threatening environment*
- *Stigma of saying that a pilot may have a mental health issue equals a loss of a medical and a career*

	Yes	No	Condition	Y
m	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Mental disorders of any sort; depression, anxiety, etc.	r.
	<input type="checkbox"/>	<input type="checkbox"/>	Substance dependence or failed	.



- **GUIDE for AMEs**

18.m. Mental disorders of any sort; depression, anxiety, etc. An affirmative answer to Item 18.m. requires investigation through supplemental history taking. Dispositions will vary according to the details obtained. An applicant with an established history of a personality disorder that is severe enough to have repeatedly manifested itself by overt acts, a psychosis disorder, or a bipolar disorder must be denied or deferred by the Examiner. (See Item 46, page 103; and Item 47, page 115).



Guide for AMEs Part II

- Psychiatric information can be derived from the individual items in medical history (Item 18). Any affirmative answers to Item 18.m., Mental disorders of any sort; depression, anxiety, etc., or Item 18.p., Suicide attempt, are significant. Any disclosure of current or previous alcohol or drug problems requires further clarification. A record of traffic violations may reflect certain personality problems or indicate an alcohol problem. Affirmative answers related to rejection by military service or a military medical discharge require elaboration.



Guide for AMEs Part III

It must be pointed out that considerations for safety, which in the mental area are related to a compromise of judgment and emotional control or to diminished mental capacity with loss of behavioral control, are not the same as concerns for emotional health in everyday life.

Some problems may have only a slight impact on an individual's overall capacities and the quality of life but may nevertheless have a great impact on safety. Conversely, many emotional problems that are of therapeutic and clinical concern have no impact on safety.



Guide to AMEs Part IV

- **Adjustment Disorder**

- If stable, resolved, no associated disturbance of thought, no recurrent episodes, **AND** psychotropic medication(s) used for less than 6 months and discontinued for at least 3 months - Issue

- 1993 Medical Textbook contains about 3- 5 pages on mental health



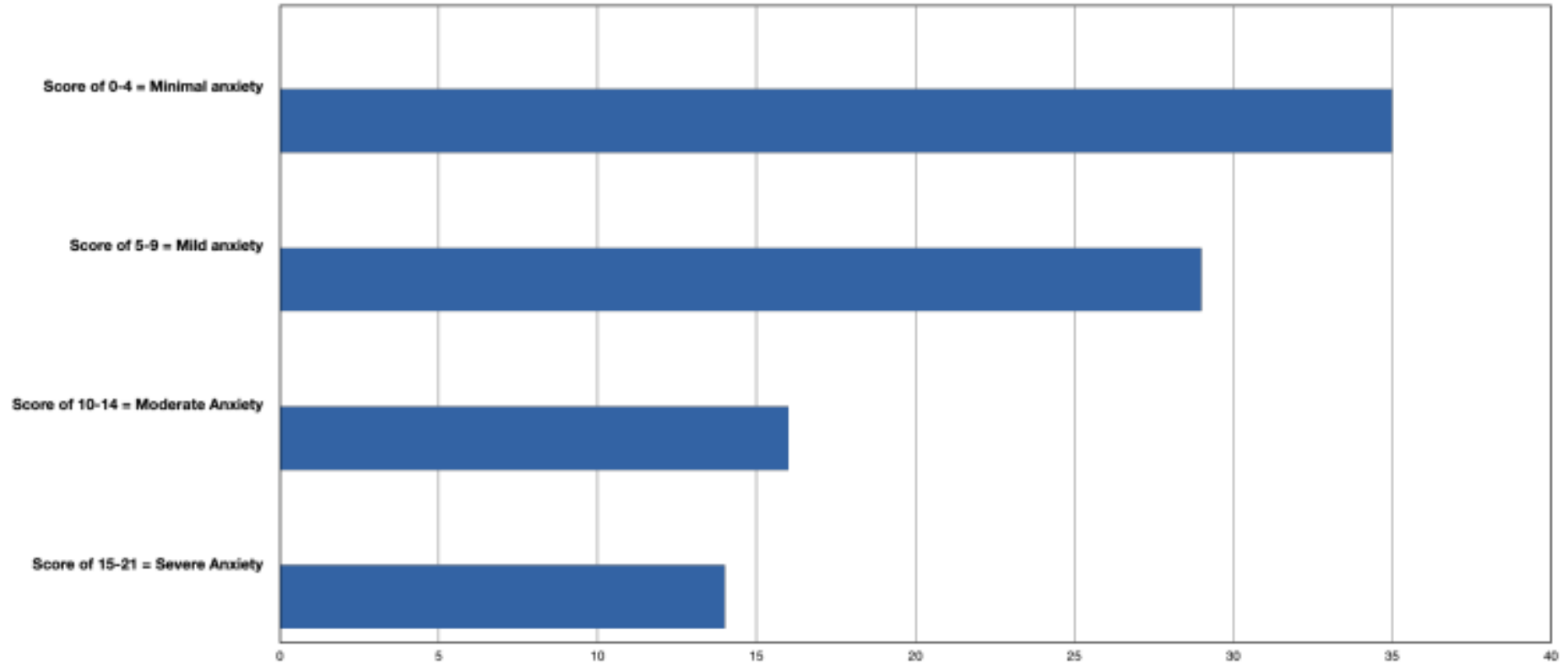
Purpose and Methodology

- **Collect information from pilots 19-25**
- **Self learning and helping students realize the importance of mental health**
- **Initial email sent to 357 students**
 - Introduction, consent filter, four block questions
 1. Generalized Anxiety Disorder Assessment (GAD-7)
 2. Patient Health Questionnaire (PHQ-9)
 3. Disorders Identification Test (AUDIT)
 4. Drug Abuse Screening Test
- **Responses: 125 (35.01%); 94 Completed or Qualified**
- **70 (74%) were male; 22 (23%) were female; 1 left blank and 1 no response**



Figure 3

KSU Pilot Anxiety Scores



Note. This figure displays four (4) categories of anxiety thresholds as part of its scoring system. The associated points Kent State University’s pilots scored are displayed within each met category. Each of the responses were based on experiences within two (2) weeks of taking the survey.



Lessons Learned

- Anxiety- higher percentage of females
- Depression- higher percentage of males
- Alcohol- Higher Percentage of Possible Dependence- Females
- Low level Drug Abuse and 5 answers of moderate level (equal)

Figure 13

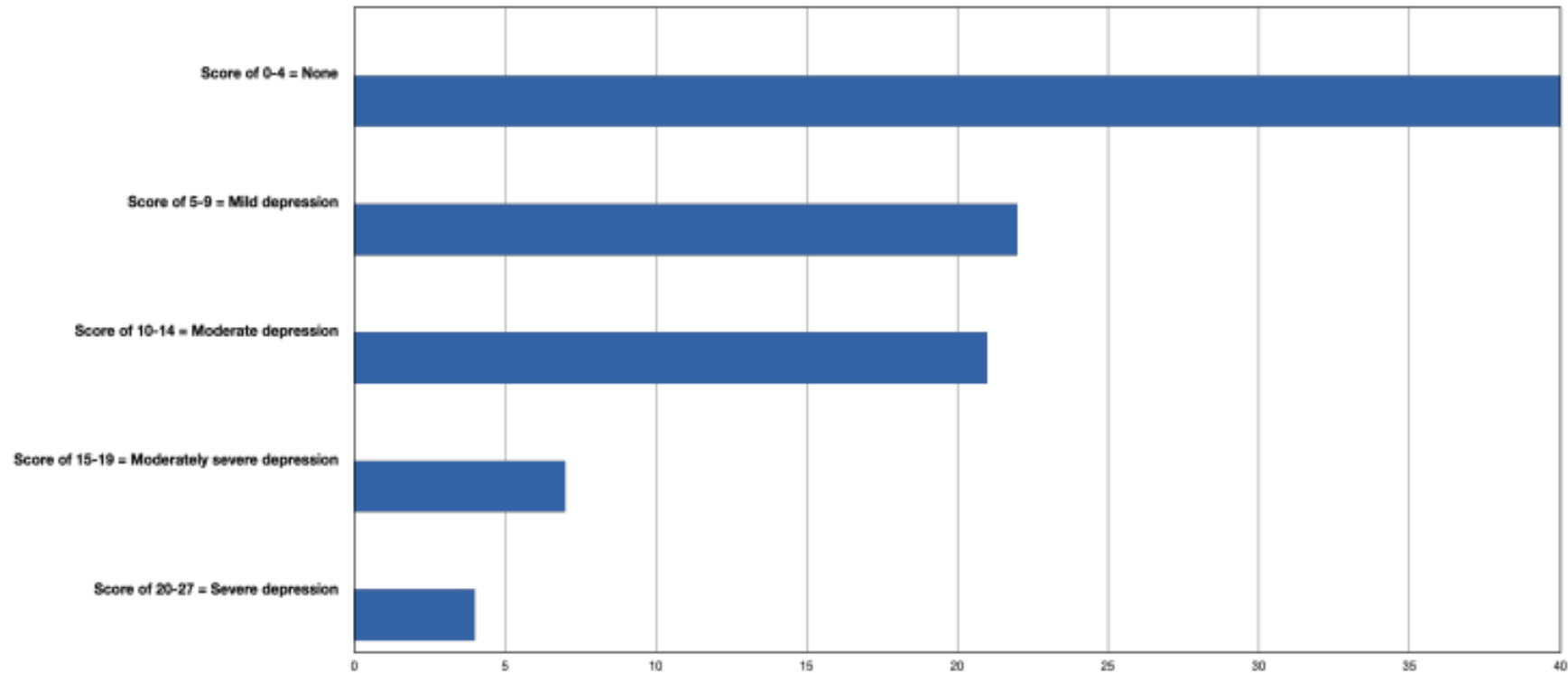
Condition Trends Per Gender Demographic

Row Labels	Average of Alcohol	StdDev of Alcohol	Average of Drugs	StdDev of Drugs	Average of Depression	StdDev of Depression2	Average of Anxiety	StdDev of Anxiety
Female	8.91	9.08	0.50	1.06	6.86	4.77	8.36	4.96
Male	5.74	5.57	0.50	1.05	7.21	6.21	7.09	5.81
Other	6.00	#DIV/0!	0.00	#DIV/0!	11.00	#DIV/0!	14.00	#DIV/0!
(blank)	2.00	#DIV/0!	0.00	#DIV/0!	10.00	#DIV/0!	8.00	#DIV/0!
Grand Total	6.45	6.61	0.49	1.03	7.20	5.83	7.47	5.60

Note. This figure displays the trends of each condition and/or block, including average and standard deviation, per observed gender.

Figure 4

KSU Pilot Depression Scores



Note. This figure displays five (5) categories of depression thresholds as part of its scoring system. The associated points Kent State University’s pilots scored are displayed within each met category. Each of the responses were based on experiences within two (2) weeks of taking the survey.



Moving Forward

- Work on a baseline with the general student population
- Work with other flight schools around the country
- Thesis: “Pilots will be statistically lower because of the stigma of mental health, potential job loss or fear of a loss of career resulting in a lack of candor when answering questions on mental health”
- Add mindfulness opportunities
- Confidential Counseling availability at the airport flight school for pilots
- Addition of a psychology class to the Pilot Major and special training for Pilots on mental health



Thank You.



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QUESTIONS?

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