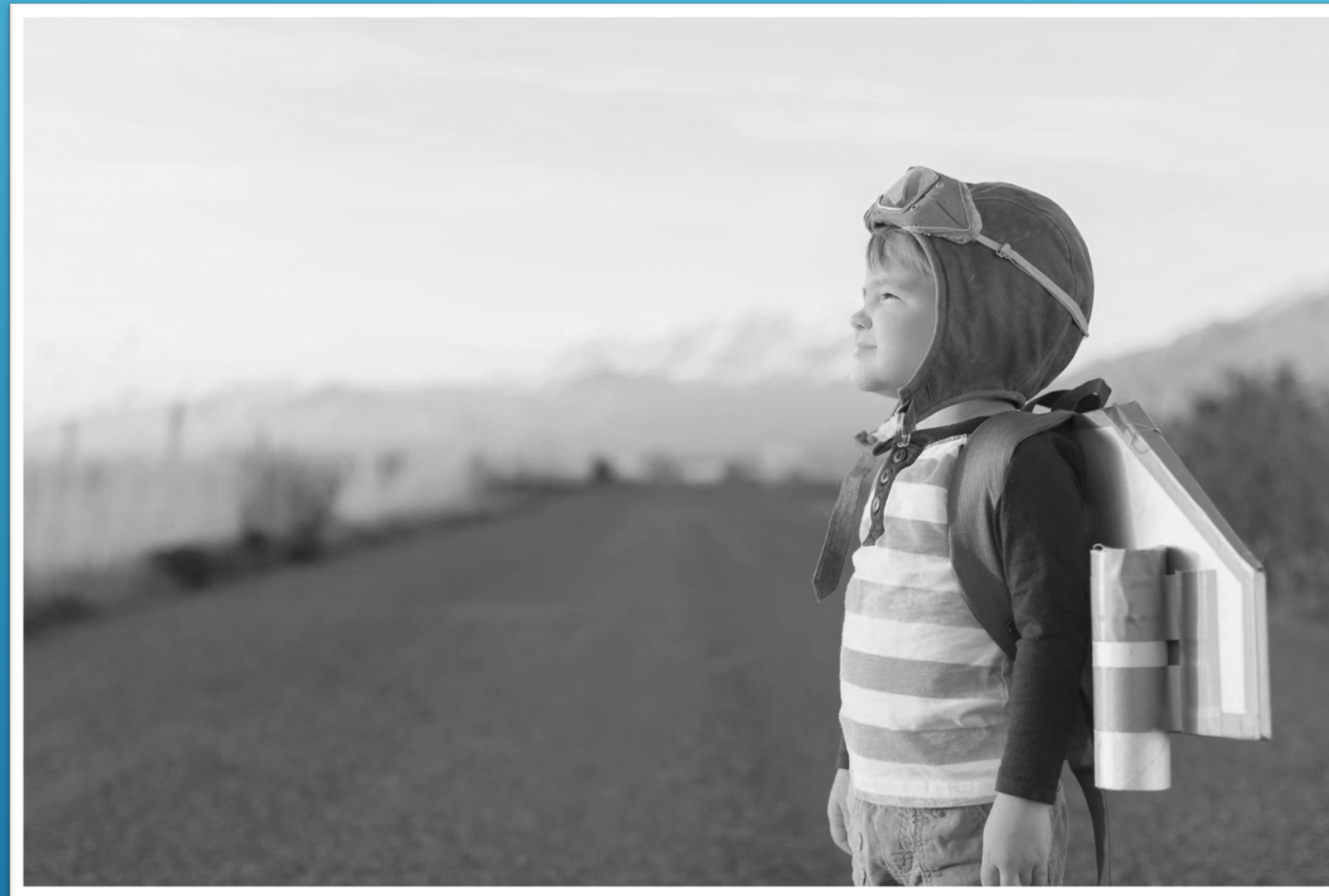


AVIATION MENTAL HEALTH



Captain Herwin Bongers



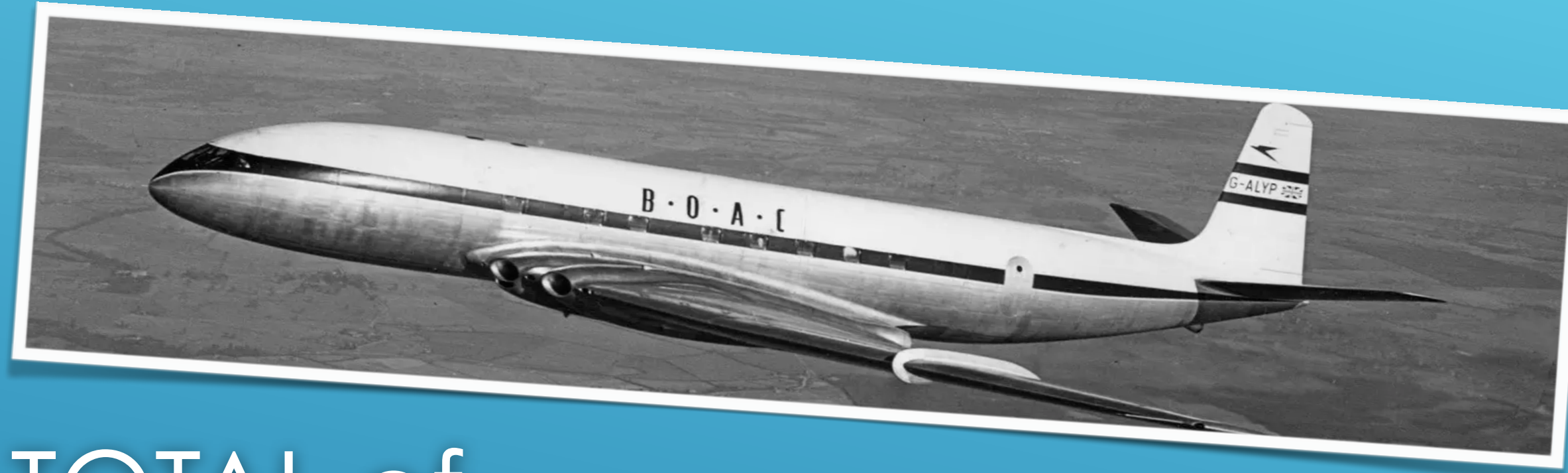
Himalayas Ama Dablam

SO, YOU'RE STRUGGLING WITH HEADSPACE....



WHAT REALLY IS THE THREAT OF
NOT ASKING FOR A HAND?

FIRST COMMERCIAL JET PASSENGER AIRLINER



ALL TIME TOTAL of MURDER SUICIDE BY MEANS OF AIRCRAFT

(Perpetrator was the pilot of passenger-carrying commercial airliner)

N=6

*

TOTAL NUMBER
COMMERCIAL FLIGHTS

1,000,000,000+



*Suicide and murder-suicide involving aircraft, Kenedi et al 2016

TABOOS

Pilots Get
Depressed and
Commit Suicide!

“Hundreds of pilots currently flying are managing depressive symptoms perhaps without the possibility of treatment due to the fear of negative career impacts.”

RESEARCH

Airplane pilot thoughts: a cross-sectional study via an online survey

Alexander C. Wu¹, Deborah F. Wu², and Joseph G. Allen^{1,3*}

Abstract

Background: The Geriatric Research in Aviation (GRA) study is the first study to provide further information on the prevalence of depressive symptoms among pilots. This is the first study to provide information on the prevalence of depressive symptoms among pilots, which are self-reports, which are

Methods: This is a cross-sectional study of pilots from April and December 2014. Data on depression scores were collected.

Results: One thousand eight hundred and sixty-six (53.5%) of the 3,469 pilots reported having depression scores at higher levels than the general population.

Conclusions

These results suggest that pilots are at a higher risk of depression than the general population.

EMBRY-RIDDLE
Aeronautical Institute

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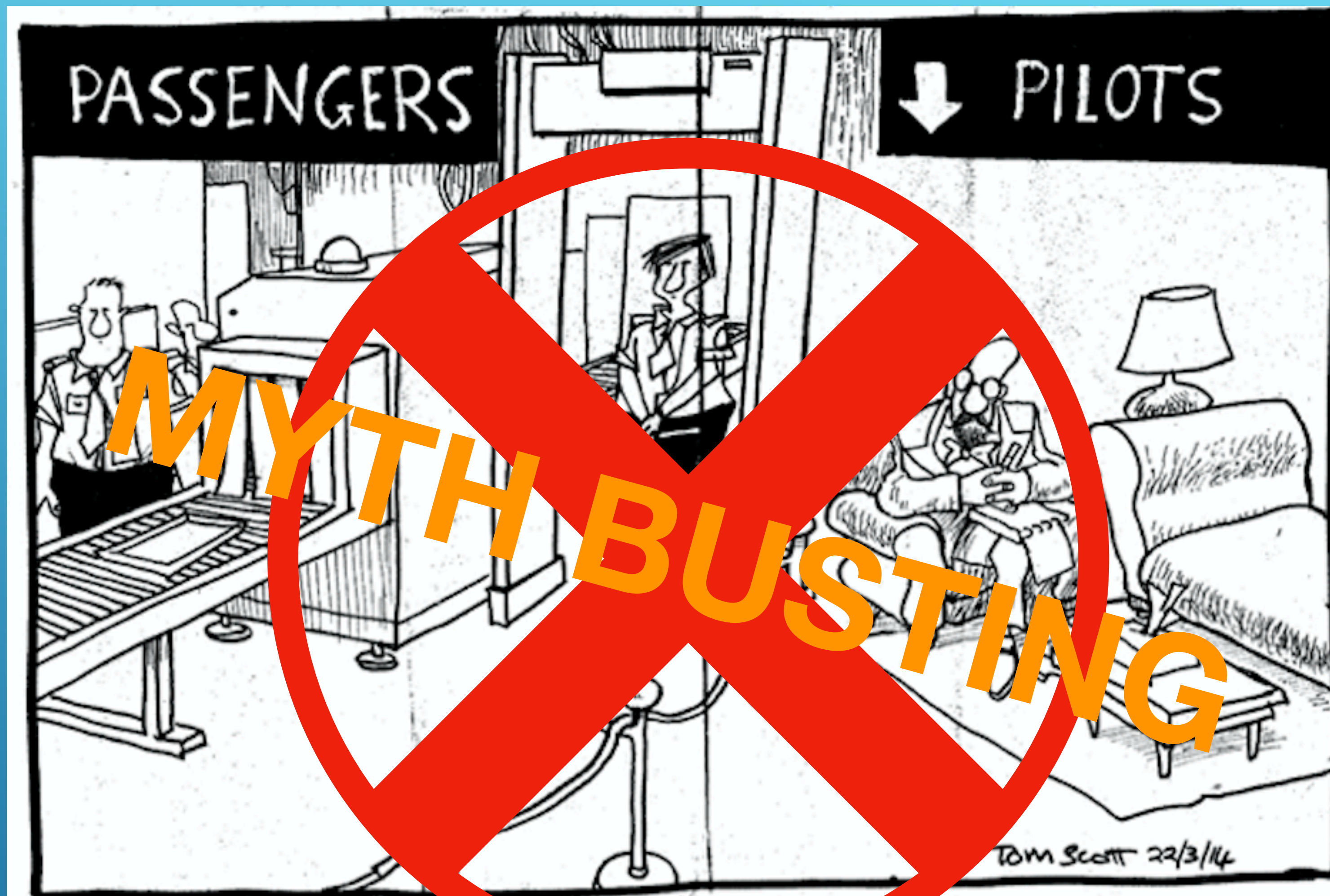
Accepted for inclusion in International Journal of Aviation, Aeronautics, and Aerospace by an authorized administrator of Scholarly Commons. For more information, please contact commons@erau.edu.



DOES PILOT DEPRESSION CAUSING SUICIDE

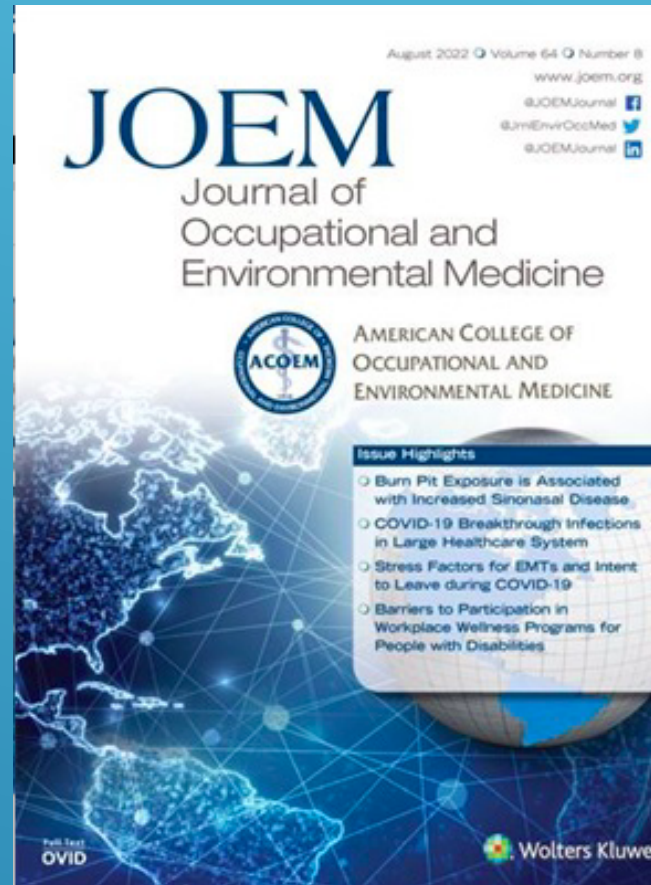
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MURDER SUICIDE BY MEANS
OF AIRCRAFT



POLITICAL AND PUBLIC REACTION

Pilots Don't Declare

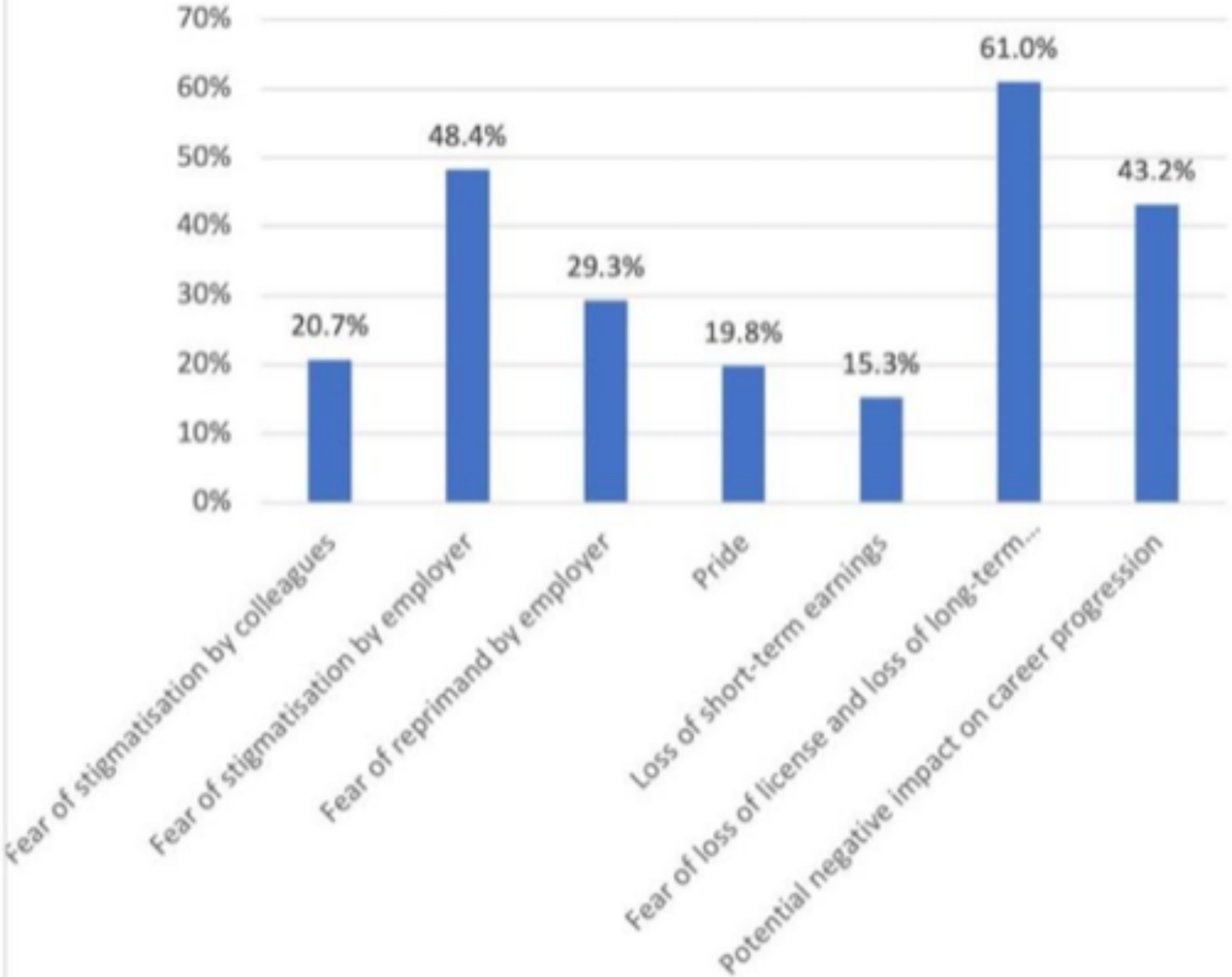


HEALTHCARE AVOIDANCE IN AIRCRAFT PILOTS DUE TO CONCERN FOR AEROMEDICAL CERTIFICATE LOSS

“Of the study cohort, 56.1% (...) [displayed] at least one type of healthcare avoidance behavior due to concerns related to their risk of aeromedical certificate loss

American College of Occupational and Environmental
Medicine 2022

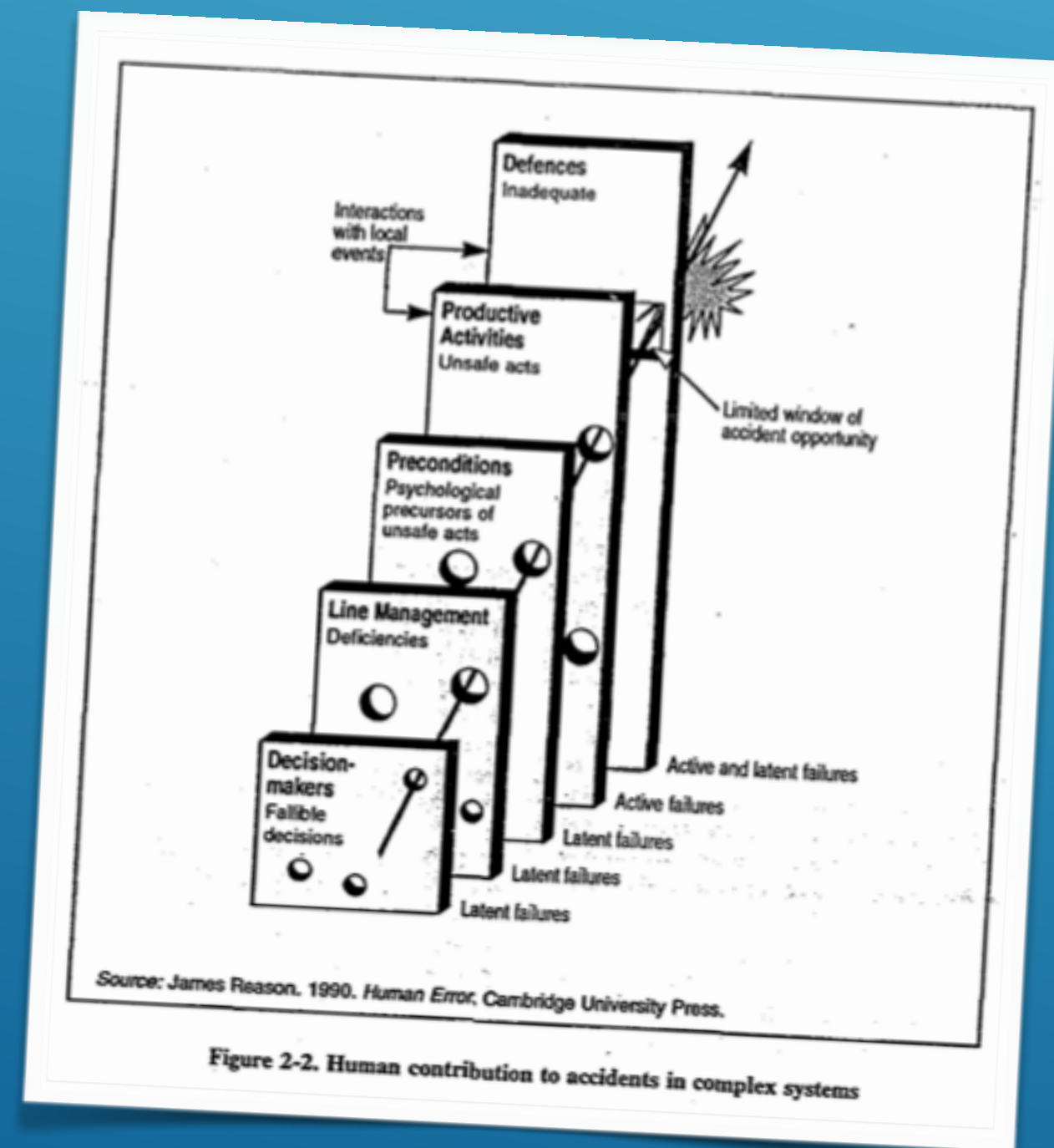
Reasons for non-disclosure of a mental health issue to your employer (2018/19) (n=734)



We Make
Mistakes!

BUT.....

We Don't Know
Which Mistakes are
Caused by Impaired
Mental Wellness!



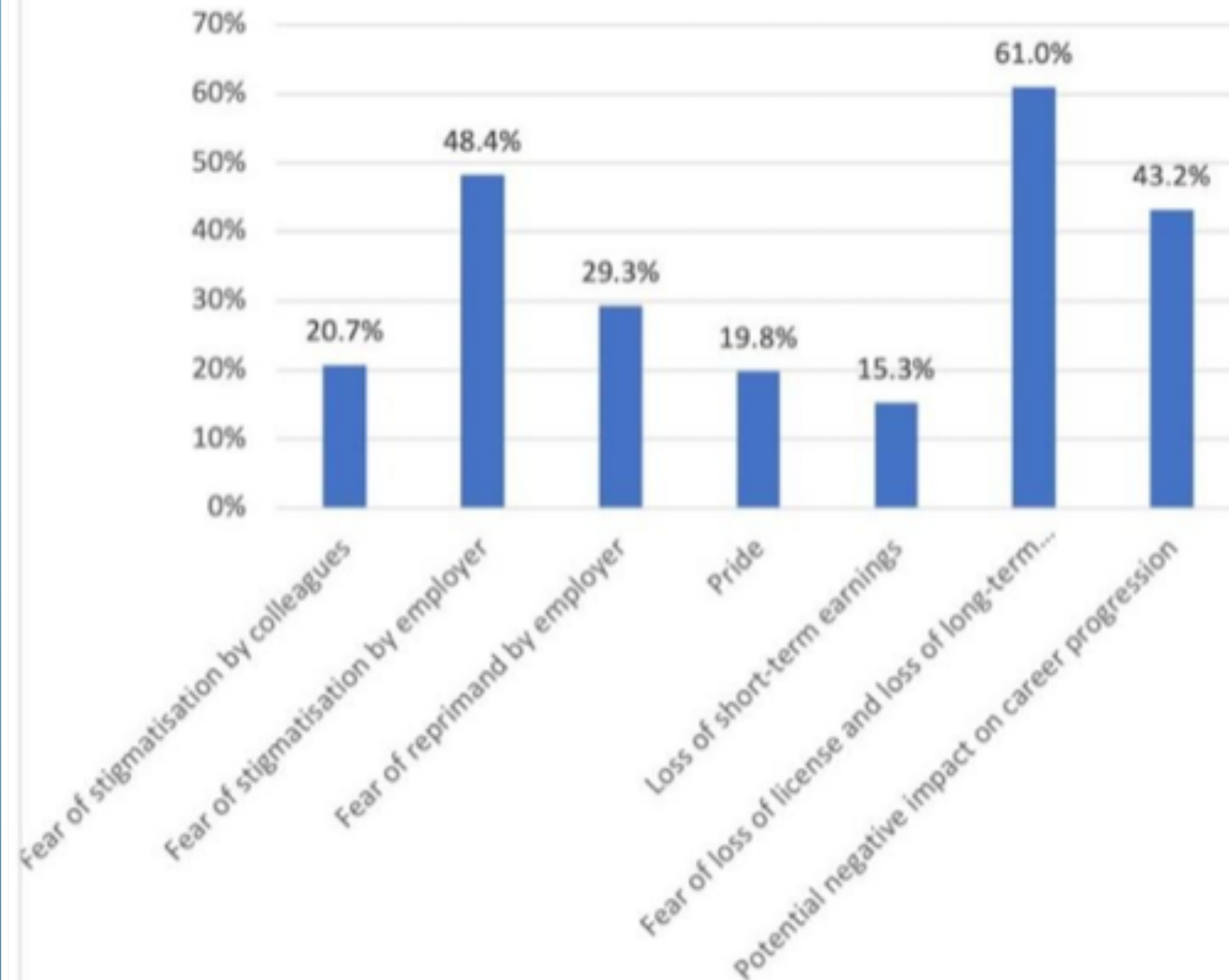
Associations between

- psychological distress,
- workplace accidents,
- workplace failures and
- workplace successes

40% increase in the odds ratio for workplace accidents for those experiencing moderate psychological distress

Michael F. Hilton • Harvey A. Whiteford, 2010
n= 60,550

Reasons for non-disclosure of a mental health issue to your employer (2018/19) (n=734)





If a man does not know to what port he is steering, no wind is favourable to him.

Seneca the Younger \approx 50CE(AD)

So Where Should We Be Heading? Safety Management System

The image features a collage of aviation safety documents and a diagram of an SMS building. The documents include:

- A document from the Australian Government Civil Aviation Safety Authority (CASA) titled "Safety Management guidance for organisations" (CAP 795).
- A document from the Civil Aviation Authority (CAA) titled "ADVISORY CIRCULAR AC100-1 SAFETY MANAGEMENT".
- A document from the International Civil Aviation Organization (ICAO) titled "INTERNATIONAL CIVIL AVIATION ORGANIZATION" (REV 2, 18 DECEMBER 2019).

The diagram depicts a classical building with four columns, representing the pillars of an SMS. The columns are labeled:

- Safety Policies & Objectives
- Safety Risk Management** (circled in red)
- Safety Assurance
- Safety Promotion

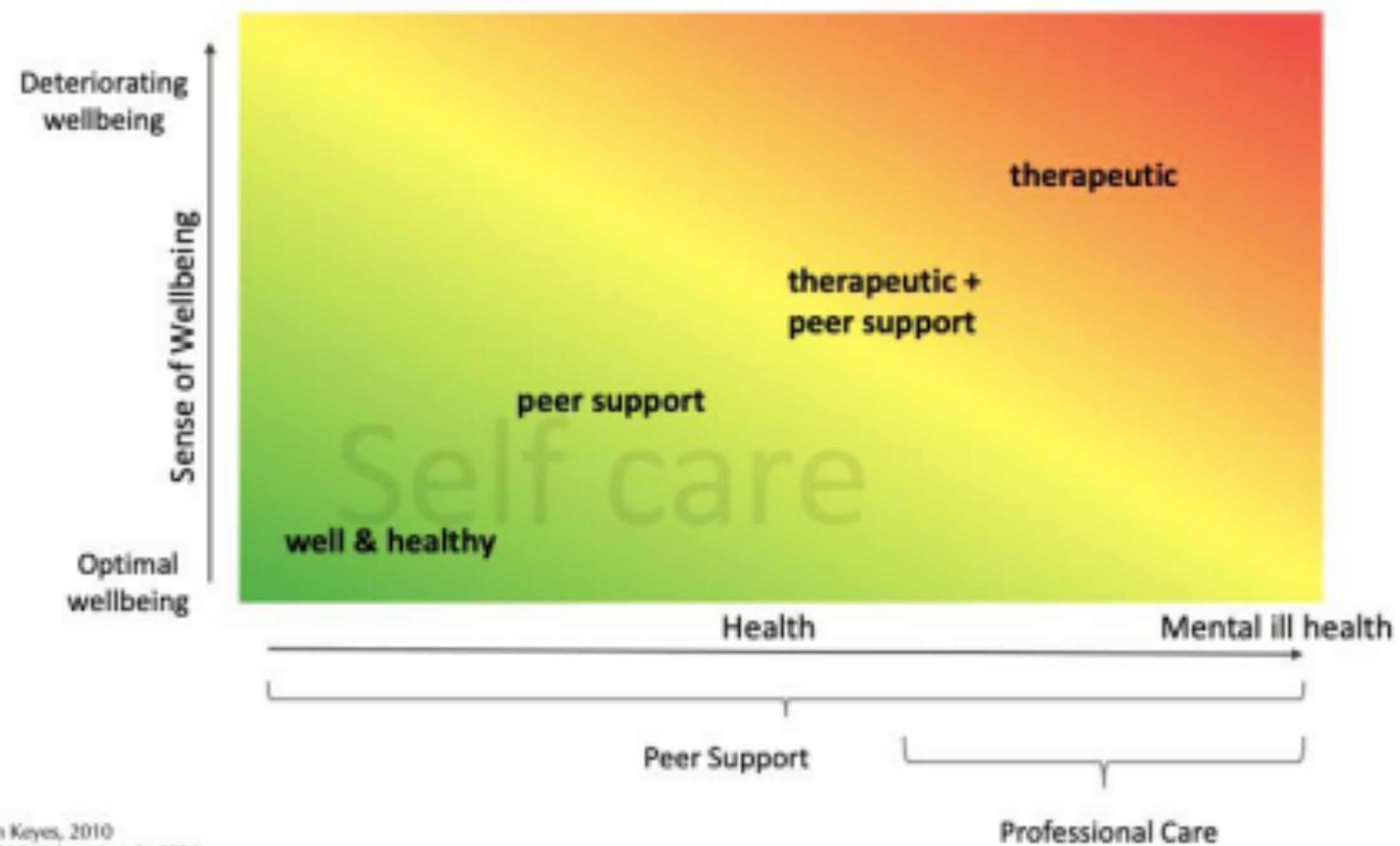
At the base of the building, the text reads:

- Just Safety Culture -
- Top Level Commitment -

Below the building, the word "performance." is written in a stylized font.

SMS and Wellness

Mental Health and Wellbeing Continuum



Modified from Keyes, 2010
Santibano, 2018, Fahrenbruck, 2020

Risk Severity Matrix

Likelihood

Almost Certain (5)	Moderate	High	Extreme	Extreme	Extreme
Likely (4)	Moderate	Moderate	High	Extreme	Extreme
Possible (3)	Low	Moderate	Moderate	High	Extreme
Unlikely (2)	Low	Low	Moderate	High	High
Rare (1)	Low	Low	Low	Moderate	Moderate
	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Critical (5)

Consequence

THREAT AND ERROR MANAGEMENT

*ICAO Promoting, maintaining and supporting mental wellbeing in aviation during the covid-19 pandemic

WHAT's The Risk?

- ◆ Cardiovascular (19%)
- ◆ Psychiatric (11%),
- ◆ Neurological (10%)
- ◆ Psychological conditions (9%)

= 30 %

Grounding of Pilots:

Medical Reasons and Recommendations for Prevention; 2021 study for EASA
Ries Simons, et al

“It is considered useful to start CVD [] preventive counselling in the beginning of a pilot's career”

Risk Severity Matrix

Likelihood	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Critical (5)
Almost Certain (5)	Moderate	High	Extreme	Extreme	Extreme
Likely (4)	Moderate	Moderate	High	Extreme	Extreme
Possible (3)	Low	Moderate	Moderate	High	Extreme
Unlikely (2)	Low	Low	Moderate	High	High
Rare (1)	Low	Low	Low	Moderate	Moderate

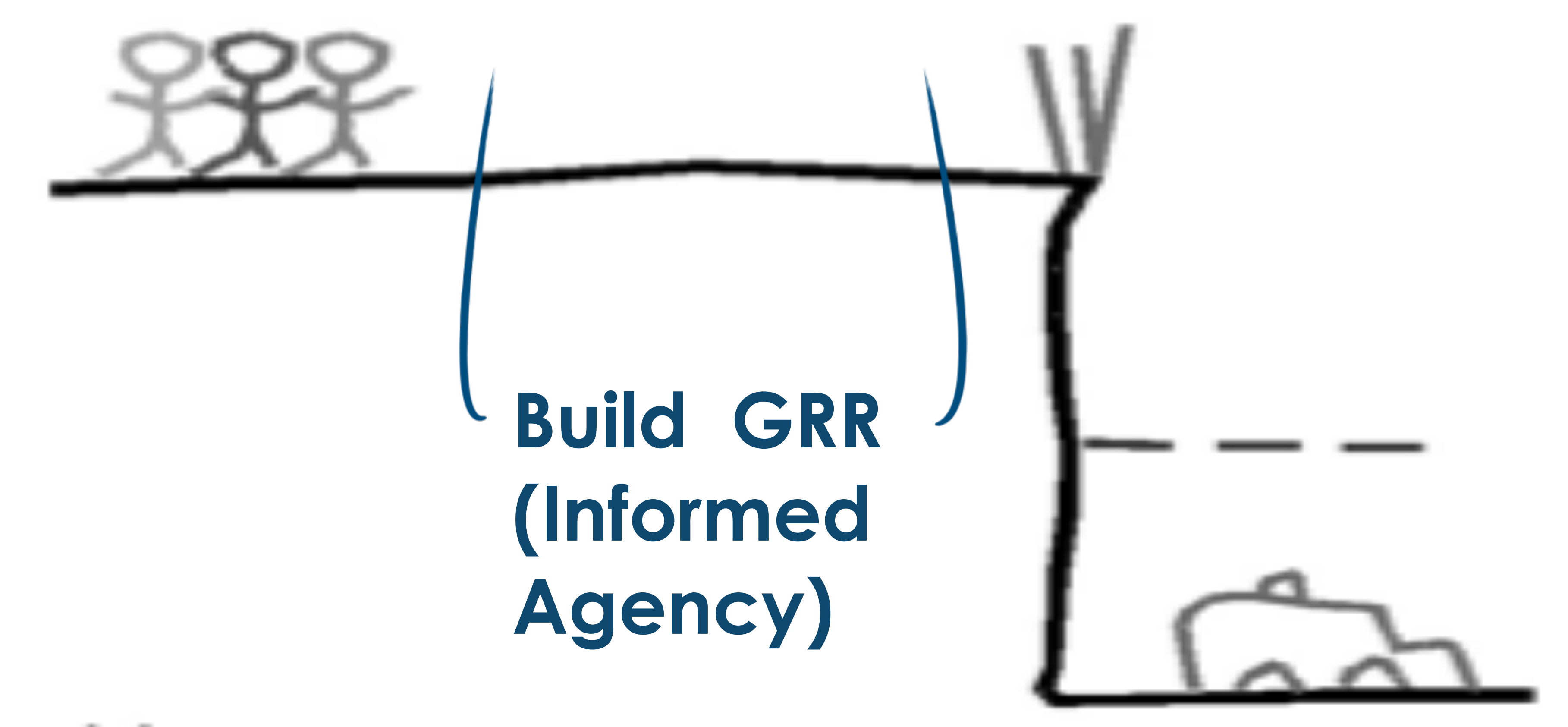
Consequence

Salutogenesis

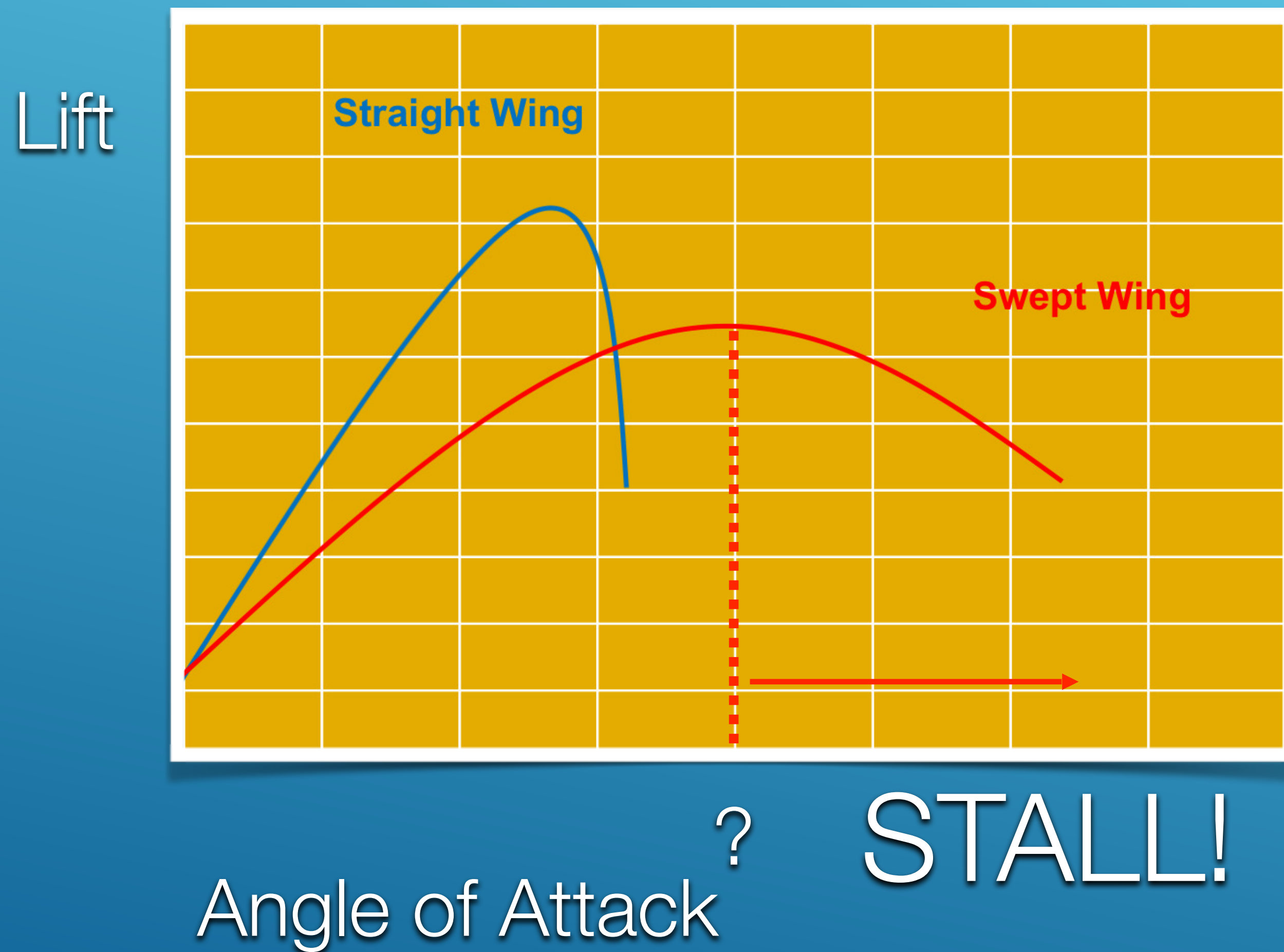


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PROACTIVE SMS



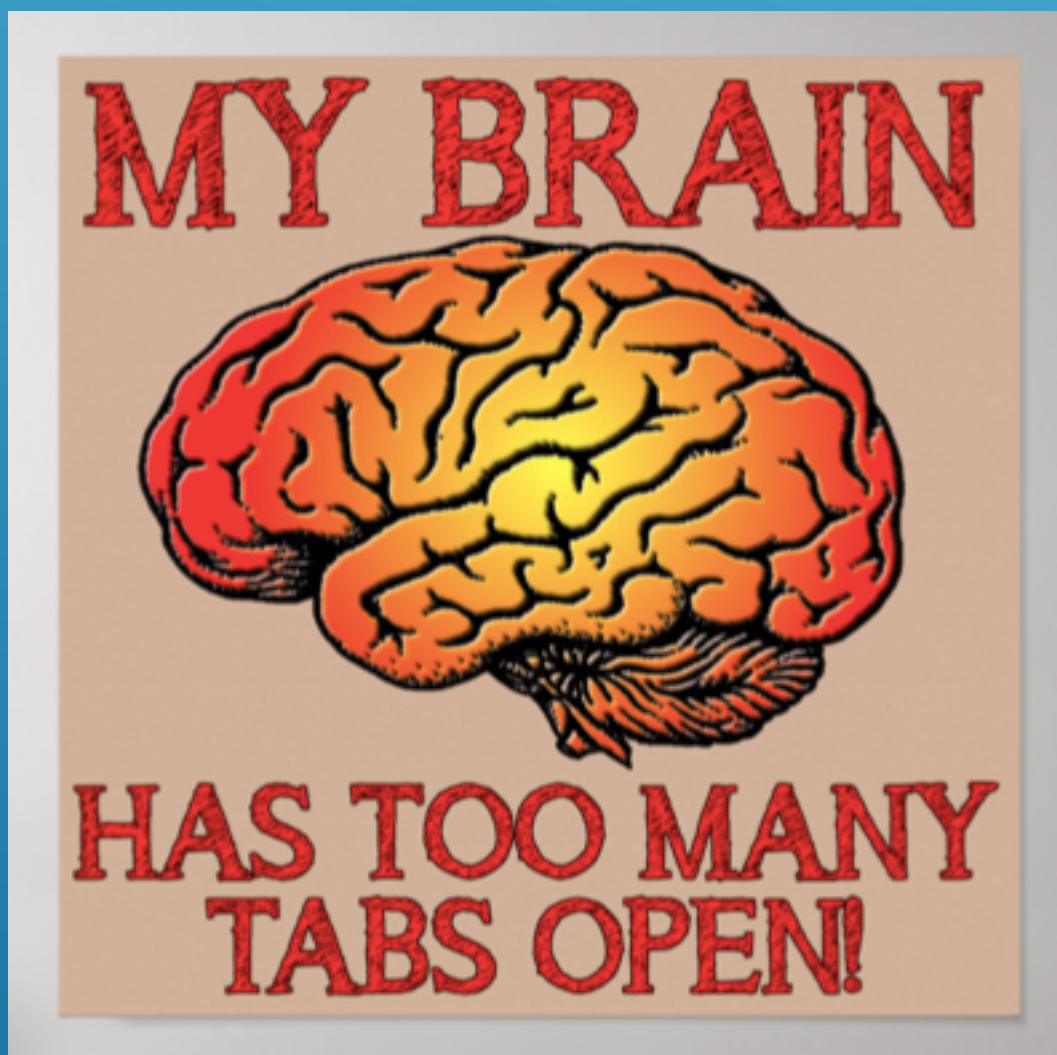
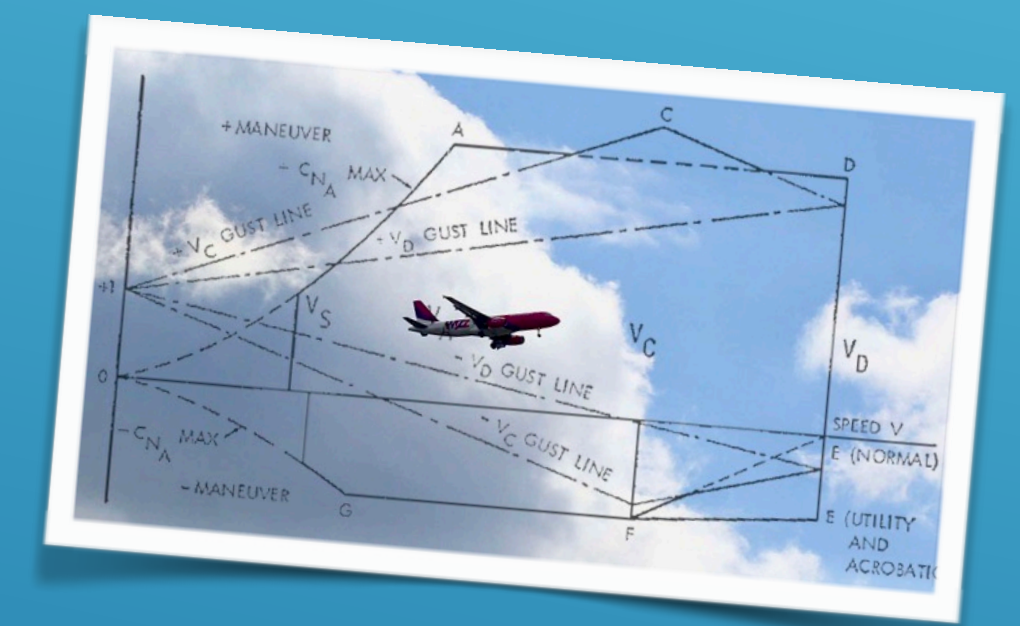
HOW To Build I.A.



- Knowledge
- Skills
- Competence

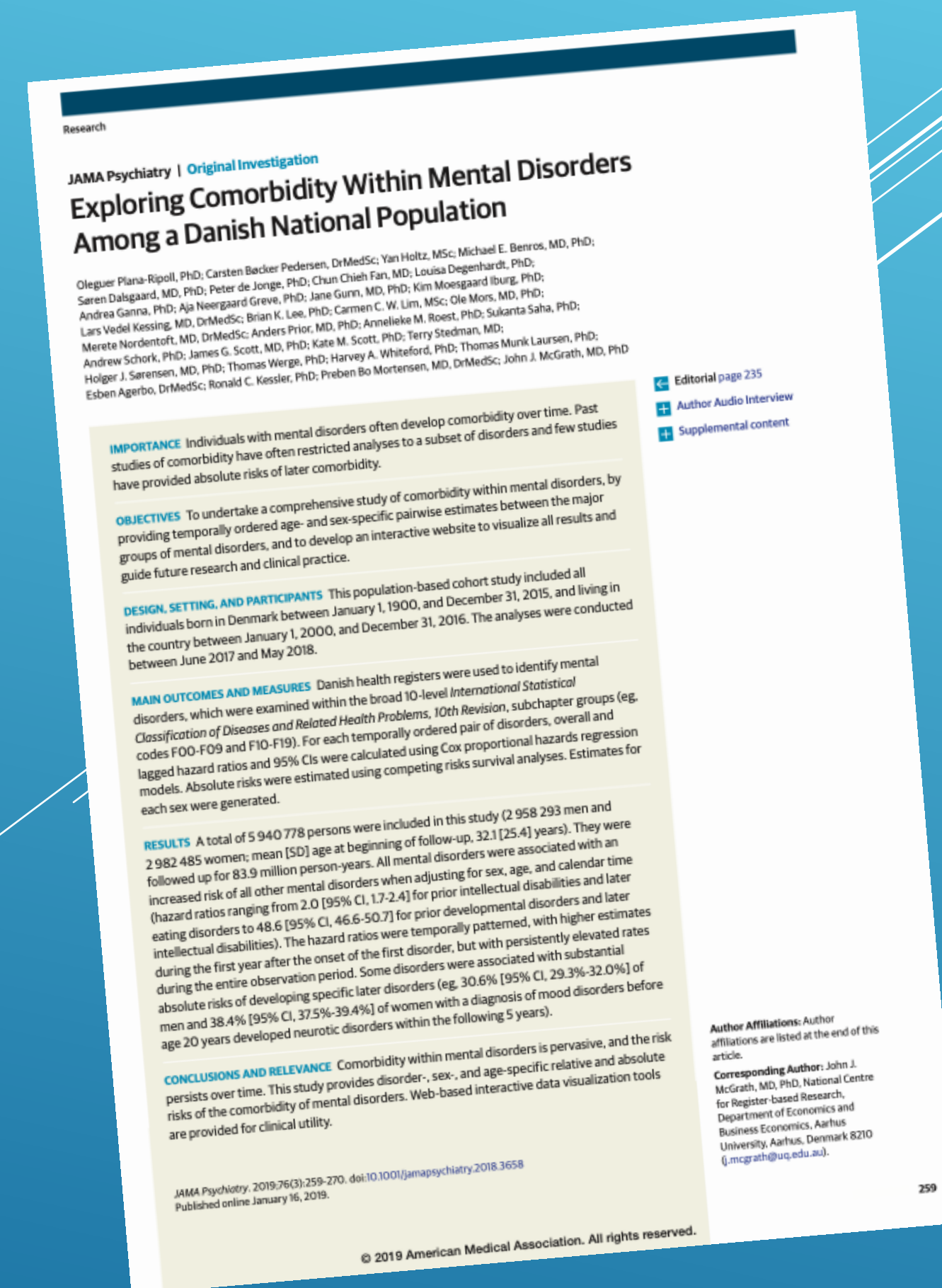
Imagine If We Treated Mental Overload like Stalling?

- Knowledge of the mind.
 - Theory and Practical (Meaning)
- Limitations to the human condition.
 - Scope of the Envelope (Understanding)
- Skills and Competence
 - Instruction and Practice (Resources)



WHEN to Build I.A. ?

Of individuals who develop a mood disorder before 40 years of age, 40% will subsequently develop an incident neurotic disorder within the next 15 years.



I.A. for Threat and Error Management

ICAO SARP:

- Shall Implement aviation health promotion,
- All Licence holders subject to medical assessment
- Reduce flight safety medical risks (SMS Integration)

EASA Study:

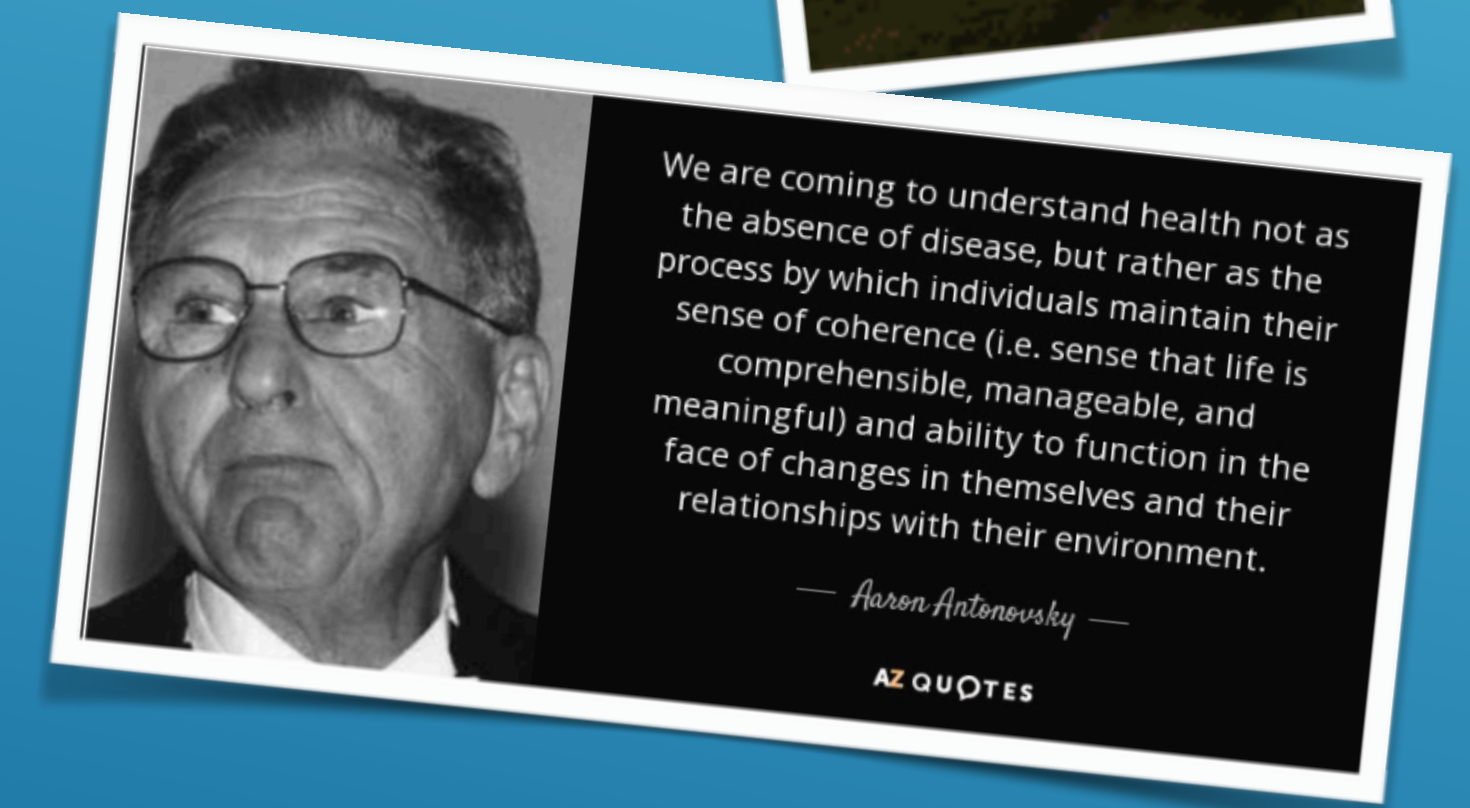
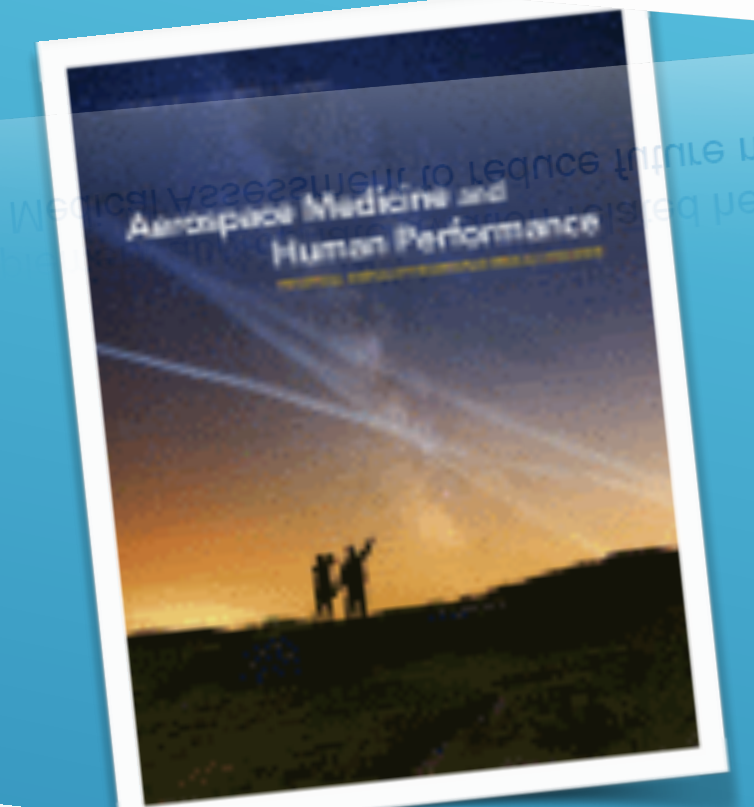
- Recommendations for preventing the medical grounding of pilots: Counselling in the beginning of a pilot's career
- (SMS Preventative)

Salutogenesis:

- Develop SoC early in life.
- Building GRRs (SMS Preventative)

MH Comorbidity Study:

- Apply Tailored Primary Prevention treatments proactively to groups at risk
- (SMS Preventative)



What are the SMS fundamentals to Pilot Mental Health?

Whole of Industry
Whole of Career

- Leadership
- SMS Protocols
 - Proactive
 - Integrative
 - TEM (MH/FS)
- Start Early
- Skills Based
- Educate to Empower Informed Agency

**OUR OBLIGATION OF
CARE FOR
OUR PEOPLE**



Antipodean Aviation Healthcare Behaviour Study

September 2023

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+64 274 4379 46

