Lived Experience Wellbeing Project

BIOLOGICAL - PSYCHOLOGICAL - SOCIAL
Introduction

1. Big picture/opening remarks
2. About Project
3. Lived Experience & WRS
4. Mental health (Self reported, PHQ, GAD, )
5. Problem Space, Stakeholders & Aviation Org Supports/Culture
6. Peer Support
7. Stress Coping (individual level)
8. COVID Situation & Need for Resilience
9. Research Roadmap & Next steps
10. Conclusions
11. Resources & Supports
12. Acknowledgements
13. Questions
– Understanding lived experience & behavior.

– Understanding & measuring impact of Work-Related Stress (WRS) on wellbeing, performance and safety.

– Resilience: Why do some workers cope better than others?

– Change: Solutions for aviation workers and industry.

Should Mental Health be feared or embraced?
What Mental Health used to be defined as:
What Mental Health used to be defined as (and still is in some circles):

Mental Wellness

Mental Illness

Us

Them
What Mental Health actually is:

Mental Illness

On an ever fluctuating continuum

All of us

Mental Wellness

Mental Wellness
What Mental Health actually is:

Mental Illness

All of us

On an ever fluctuating continuum

Mental Wellness
THE RIGHT STUFF

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin
Out of your vulnerabilities will come your strength.

- Sigmund Freud
# Research Overview

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**Susceptibility vs Resilience**

**Wellbeing I vs Wellbeing II**
Preliminary Field Research

- 2015
- Informal Interviews
- n=103
- No agenda, just curiosity...
- “Why were some pilots suffering?”
3 Pillars of Health

Wellbeing

**Biological**
- Sleep
- Exercise
- Diet

**Psychological**
- Attitude to life
- Stress Management & Coping Techniques
- Meaning & Purpose

**Social**
- Interpersonal relationships
- Support Network

Lack of peer support

Macho culture

“The Right Stuff”

Increased/unequal domestic pressure on spouse

Max important family events

Irritability

Moody taken in low season

Limited opportunity & difficulty in maintaining supportive relationships with colleagues

Lack of familiarity with colleagues => reduced awareness of norms

Ever-changing crew composition

“Living The Dream”

Lack of understanding/support from family & friends

Anti-social hours* & irregular hours*

Working while family/friends are off and vice-versa

Communication with family/friends very restricted while on duty

Confined to the cockpit*

Time away from home

Social isolation

Isolation from family

Isolation from friends

Strained relationship with children

Strained relationship with spouse

Poor Social Network

Loneliness & isolation

Inflexible & disruptive schedules

Finish time unpredictable

Inability to work flex-time

Inflexible annual leave

Strained home life

Disrupted circadian rhythm

Confined to the cockpit*

Social Pillar of Pilot Wellbeing

2015-2016
n=103

Irregular hours*

Loneliness

2015-2016
n=103

Irregular hours*

Loneliness

2015-2016
n=103
Harvard Study (2016)

- Clinical Depression / Major Depressive Disorder (MDD) symptoms within last 2 weeks (n=1848)
  - 12.6%
- Having Suicidal Thoughts within last 2 weeks (n=1848)
  - 4.1%
Hazard Identification

“Say ... what’s a mountain goat doing way up here in a cloud bank?”

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### Susceptibility vs Resilience

**Wellbeing I vs Wellbeing II**
“...different environment from the 90’s... health issues emerging now, not seen as often in the past, or not at all... young captains needing back surgery...”

“I’m a night owl, and when on early duties, stay awake early in the morning using coffee. Still can’t get to sleep until late, and end up only getting about 4 hours sleep...”

“...not simply sedentary, but effectively impaled into the seat... need to get permission to use the bathroom”
Biological

“...restricted movement due to locked cockpit door... can’t rotate in the chair... can’t stretch out or stand up straight... muscle cramps and stiffness”

“I never had IBS until I started work as a pilot...”

“...lack of breaks, including bathroom breaks. Postponed defecation is a big stress”
“...feel dehumanised by management, referred to as a ‘fulltime equivalent’...just a staff number... feel objectified...”

“Get to ops, go to aircraft, get things moving, 30-minute turn-around, do it all over again. Don’t get 5 minutes to myself...”

“I’m not proud of my company...”
Psychological

“Battle with management a constant source of stress and anxiety... they are bonus chasers and don’t experience the impact of their decisions... they’re not on the same team as the pilots”

“The vagueness of some rules is a source of stress...”

“We’re always understaffed...”
“...come home and your body clock is out of sync with the rest of the family”

“...fixed-pattern roster has benefits, predictability, but can be very inflexible... missing major family and social events...”

“We’re 5 miles up, hanging onto a pair of wings. It’s unnatural but we’ve normalised this... can’t just step out for a minute...”
Social

- “...dragging your life behind you in a suitcase”

- “We’re not special or unique, but our job is unique...”

- “As a foreigner, it’s hard to make new friends, in a new country... cultural differences... hard to fit in”

- “...fixed -pattern roster has benefits, predictability, but can be very inflexible... missing major family and social events...”
Workshop Findings (n=33)

Impact Scenarios Identified by Pilots

(Cahill, Cullen & Gaynor, 2018)

1. Pilot mostly coping well
2. Pilot mostly coping well but impact on physical health
3. Pilot experiencing difficulty but mostly coping well
4. Pilot mostly coping but long-term impacts
5. Pilots not coping
6. Extreme Cases

Safety Impact

- None – pilot self-corrects
- None – pilot self-corrects
- Errors leading to a near-miss. Picked up by other pilot.
- N/A (operational/safety – but impacts in personal life)
- N/A (operational/safety – but impacts in personal life)
- Potential for Serious incident/Fatal Accident
Workshop Findings (n=33)

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Errors leading to a Serious Incident or Fatal Accident

N/A (operational/safety – but impacts in personal life)

Potential for Serious incident/Fatal Accident

None – pilot self-corrects
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### Susceptibility vs Resilience

**Wellbeing I vs Wellbeing II**
Lived Experience of a Pilot survey (n=1,059)
Sources of Work Related Stress (2018/2019 – Pre COVID)

- Anti-social hours
- Changing nature of job
- Fresh food?
- Divergence of values
- Inflexible annual leave
- Irregular hours
- Roster uncertainty
- Lack of engagement
- Long duties
- Sedentary nature of job
- Time away from home

Wellbeing Issues suffered due to job (2018/2019 – Pre COVID)

- Musculoskeletal – 73.5%
- Digestive – 58.5%
- Sleep difficulties – 81.0%
- Respiratory – 32.3%
- Cardiovascular – 14.5%
- Marital discord – 42.9%
- Loneliness – 49.9%
- Psychological distress – 36.9%

Pilots are suffering, but they are also adapting and coping (2018/2019 Survey)
How to Fly Straight & Level in Turbulent Times

Turbulent Times

How to Fly Straight & Level in Turbulent Times

FLIGHT SAFETY FOUNDATION

An Aviation Professional's Guide to Wellbeing

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### Susceptibility vs Resilience

**Wellbeing I vs Wellbeing II**
3 Big Questions

- Change
- Morale & Wellbeing of Safety-Critical Staff
- Lack and/or Delegation of Safety Oversight
## COVID 19: Wellbeing – Positives & Challenges

<table>
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<tr>
<th>#</th>
<th>Operational Scenario</th>
<th>Positives</th>
<th>Sources of Stress</th>
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<tr>
<td>1</td>
<td>In work</td>
<td>Salary and financial wellbeing. Getting out of the house. Purpose obtained from job.</td>
<td>Flying in a different environment Keeping track of changing schedule Managing childcare while working Financial wellbeing – reduced salary Uncertainty as to future financial security Different treatment of colleagues – guilt, discrimination Uncertainty about status of co-pilot (severity of suffering) Potential bereavement Social isolation Loss of social network Difficulties maintaining social network Potential illness/health challenges in family</td>
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<td>2</td>
<td>Off work</td>
<td>Improved sleep.</td>
<td>Financial wellbeing – reduced salary and or unemployment</td>
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<td>Improved diet.</td>
<td>Uncertainty as to financial security</td>
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<td>More time with family.</td>
<td>Social isolation</td>
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<td>Opportunity to take exercise (albeit limited with government rules/2km).</td>
<td>Loss of social network</td>
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<td>Difficulties maintaining social network</td>
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<td>Loneliness</td>
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<td>Not enough ‘me time’</td>
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<td>Too much time with family</td>
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<td>Lack of routine</td>
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<td>Emotional instability</td>
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<td>Returning to work</td>
<td>Getting out of the house.</td>
<td>Emotional instability</td>
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<td>Purpose obtained from job.</td>
<td>Loss of social network</td>
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<td>Social interaction.</td>
<td>Job proficiency and potential loss of confidence</td>
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<td>Training and competency – out of practice</td>
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The Impact of COVID-19 Pandemic on Aviation Workers & The Aviation System

- Anonymous online survey
- Involved Stakeholders in survey design
- PHQ-9 and GAD-7
- Snapshot (3 weeks – August 2020)
- Diverse sample
  - Age
  - Gender
  - Experience

- Targeted all Safety-Critical workers in Aviation
- 2,050 participants
- 38% Pilots
- 19% Cabin Crew
- 11% Air Traffic Control
- 8% Maintenance/Engineering
Clinical Depression (Threshold ≥ 10, PHQ 9)

- Harvard (2016) - Pilots Only (N=1,866)
- TCD (2019) - Pilots Only (N=1,059)
- TCD (2020) - Pilots Only (N=729)
- TCD (2020) - All Aviation Workers (N=2,050)

COVID-19
Having suicidal thoughts

- Harvard (2016) - Pilots Only
- TCD (2019) - Pilots Only
- TCD (2020) - Pilots Only
- TCD (2020) - All Aviation Workers

COVID-19
Wellbeing Questions

How am I feeling?

How am I coping?

What can I do for myself and others?


Workplace issues associated with a greater risk of developing common mental health problems

- Occupational uncertainty
- Mental Health Difficulties
  - Imbalanced job design
    - High job demands
    - Low job control
    - High effort-reward imbalance
  - Lack of value and respect
    - Low relational justice
    - Low procedural justice
    - Role stress
    - Bullying
    - Low social support

Self Reported Mental Health (2020 Survey)

- Very good
- Good
- Fair
- Bad
- Very bad
- Don’t know
- Prefer not to say

2020 (COVID)
My Mental Health Has Worsened Since COVID 10 Pandemic

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

2020 (COVID)
HAS YOUR JOB STATUS CHANGED DURING THE COVID-19 PANDEMIC? (PHQ-9)

- **None**
- **Mild**
- **Moderate**
- **Moderately Severe**
- **Severe**

**YES (N=889)**
- None: 24.5%
- Mild: 37.6%
- Moderate: 21.5%
- Moderately Severe: 9.4%
- Severe: 7.0%

**NO (N=907)**
- None: 44.2%
- Mild: 34.5%
- Moderate: 13.9%
- Moderately Severe: 5.4%
- Severe: 2.0%

2020 (COVID)
ARE YOU RECEIVING REDUCED SALARY? (PHQ-9) (N=440)

- **None**
- **Mild**
- **Moderate**
- **Moderately Severe**
- **Severe**

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<td>28.1%</td>
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<td>Moderately Severe</td>
<td>9.7%</td>
<td>11.8%</td>
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2020 (COVID)
2020 (COVID)
HAS YOUR JOB STATUS CHANGED DURING THE COVID-19 PANDEMIC? (GAD)

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<td>6.6%</td>
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<td>50.6%</td>
<td>33.2%</td>
<td>10.1%</td>
<td>6.1%</td>
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2020 (COVID)
ARE YOU RECEIVING REDUCED SALARY? (GAD) (N=440)

2020 (COVID)
Significant increases in Mental Health difficulties post-COVID

Self-report data from a nationally representative Irish sample (N = 1,041) collected in April 2020.
- positive for depression (22.77%)
- generalized anxiety (20.00%)
- anxiety/depression (27.67%)
- Screening positive for anxiety/depression was associated with
  » younger age
  » female sex
  » loss of income due to COVID-19
  » COVID-19 infection
  » higher perceived risk of COVID-19 infection.

Hyland et al. (pre-print)

Self-report data from a nationally representative UK sample (N = 2025) collected in March 2020.
- depression (22.12%)
- anxiety (21.63%)
- Anxiety/Depression (27.75%)

Screening for anxiety or depression, and trauma symptoms was associated with
- younger age
- presence of children in the home
- high estimates of personal risk
- low income
- loss of income, and pre-existing health conditions in self/others

Shevlin et al. (pre-print)
Problem Space, Stakeholders & Aviation Org Supports/Culture

Defining/understanding the problem

Identifying and testing solutions

Choosing and implementing a solution
Problem Space, Stakeholders & Aviation Org Supports/Culture

Defining/understanding the problem

- Identifying and testing solutions

Choosing and implementing a solution

HUMAN FACTORS ACTION RESEARCH

STAKEHOLDER EVALUATION

Understanding Problem | Evaluating Lived Experience & Existing Solutions | Recommendations
**Problem Space, Stakeholders & Aviation Org Supports/Culture**

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Understanding Problem | Evaluating Lived Experience & Existing Solutions | Recommendations
## Stakeholders & Problem Space

### STAKEHOLDERS
1. Aviation workers
2. Aviation organisations supporting them
3. People & community supporting them
4. Regulator
5. Aviation industry
6. Society
7. Government

### PROBLEM SPACE
1. Job demands, managing WRS & home/work interface
2. Attitudes to mental health and reporting problems
3. Coping strategies & behaviours
4. Aviation organisation: culture & design of existing supports (training, EAP, peer support etc)
5. Aviation organisation: approach to risk/safety management
6. Regulator approach and aeromedical assessment
7. COVID 19 Pandemic

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Trinity College Dublin
Coláiste na Tríonóide, Bailé Átha Cliath
The University of Dublin
Stakeholders: Principles & Values

1. Aviation Workers
2. Aviation Organisations supporting them
   - Airlines
   - MRO
3. Wellbeing
4. Regulator

Professionalism | Duty of care/responsibility | Compassion | Safety Oversight | Responsible work
# States (Aviation Workers)

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<th>Manage/Mitigate/Reduce</th>
<th>Avoid</th>
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<td>Work related stress/WRS, Anxiety in work, Pressure, Poor mental health in work</td>
<td>Worsening of health in work, Work contributing to health problems, Poor mental health, Presenteeism, Absenteeism</td>
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<td>Psychological wellbeing in work</td>
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<td>Exhaustion &amp; Burnout</td>
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<td>Coping/adaptive coping, Self-management of health</td>
<td>Maladaptive coping</td>
<td>Maladaptive coping, Self-harm</td>
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<td>Self-efficacy</td>
<td>Loss of control/agency</td>
<td>Post-neurotic subject at work</td>
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<tr>
<td>Identity in work</td>
<td>Loss of identity</td>
<td>Objectification of worker</td>
</tr>
<tr>
<td>Professionalism</td>
<td>Challenges to professionalism</td>
<td>Lack of professionalism</td>
</tr>
<tr>
<td>Safe and effective performance</td>
<td>Performance errors, Unsafe behaviour, Near misses (safety events), Minor safety events</td>
<td>Performance Errors, Safety events, Incidents and accident in work</td>
</tr>
<tr>
<td>State to Promote/Support</td>
<td>Manage/Mitigate/Reduce</td>
<td>Avoid</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Healthy workforce</td>
<td>Health issues arising from stress in work, poor MH in work, absenteeism, presenteeism</td>
<td>Unhealthy workforce, absenteeism, presenteeism</td>
</tr>
<tr>
<td>Positive work culture, culture of attending to wellbeing, disclosing problems</td>
<td>Fear disclosing MH problems, poor communications between staff regarding health and wellbeing</td>
<td>Unhealthy work culture, lack of disclosure</td>
</tr>
<tr>
<td>Responsible business (CSR &amp; positive contribution to society and environment)</td>
<td>Negative impact – people, society, environment</td>
<td>Negative impact – people, society, environment</td>
</tr>
<tr>
<td>Compliance with regulatory requirements</td>
<td>Compliance breech and penalties</td>
<td>Compliance breech and penalties</td>
</tr>
</tbody>
</table>
Aviation Company: Wellbeing Approach & Culture

• Identity, principles & values/attitudes, culture
• Processes and practices associated with org functions
  – Occupational Health & Support
  – Training
  – EAP
  – Peer Support (small few within company)
  – Safety/Risk
  – Flight Planning/Rostering
My Company Cares About My Wellbeing

- **Strongly Agree**
- **Agree**
- **Neutral**
- **Disagree**
- **Strongly Disagree**

TCD Survey 2018/2019 (Pilots only, N=1059)
TCD COVID Survey 2020 (Pilots Only, N=729)
TCD COVID Survey 2020 (All Aviation Workers, N=2050)
My Company Cares About My Wellbeing

- Strongly Agree: 4.00%
- Agree: 20.00%
- Neutral: 25.00%
- Disagree: 20.00%
- Strongly Disagree: 30.00%

2020 (COVID)
2020 (COVID)
The process for supporting positive mental health and managing mental health problems in Pilots **SHOULD BE** clearly defined at an airline level.

2018/2019 (Pre COVID)
The process for supporting positive mental health and managing mental health problems in Pilots is clearly defined at my airline.
Wellness Programmes Provided to Pilots at Airline

- **Yes**: 40.00%
- **No**: 35.00%
- **Don't know**: 30.00%

(Pre COVID) 2018/2019
How effective do you feel these programmes are?

- Highly effective
- Effective
- Neutral
- Not effective
- Highly ineffective

2018/2019 (Pre COVID)
The Safety Management practices at my airline adequately address issues concerning the support & management of Pilot mental health & wellbeing

2018/2019 (Pre COVID)
Supporting and maintaining positive mental health for aviation 'Safety-Critical Workers' during the COVID-19 pandemic is a key priority for my airline.
Has your company provided you with any specific support to cope with stresses arising from COVID and any changes to your wellbeing?

- **Yes**
- **No**

**2020 (COVID)**
Have you used this support?

- All: 70.00%
- Pilots: 70.00%
- Cabin Crew: 90.00%
- ATC: 70.00%
- MX: 70.00%
- Others: 70.00%

2020 (COVID)
Although your company has not provided any support, would you use this if provided?

<table>
<thead>
<tr>
<th>Group</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilots</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabin Crew</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2020 (COVID)
Aviation workers who are currently working in "Safety-Critical' roles need support to maintain their wellbeing during the COVID-19 pandemic.
Those 'Safety-Critical' aviation workers who are currently not working, need support to maintain their wellbeing now, so that they are fit to return to work post the COVID-19 pandemic.

2020 (COVID)
Wellbeing Support Provided by Company (COVID)

1. In house company services/support
2. Outside services (paid for by company)
3. Signposted to services outside the company
Examples of Wellbeing Support Provided by Company (COVID)

<table>
<thead>
<tr>
<th>1: In house company services/support</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Online wellbeing seminars - power point presentation on wellbeing</td>
</tr>
<tr>
<td>• Access to online resources</td>
</tr>
<tr>
<td>• A phone call to check in with us</td>
</tr>
<tr>
<td>• Virtual coffee/meet up</td>
</tr>
<tr>
<td>• Newsletters on yoga and meditation</td>
</tr>
<tr>
<td>• Flexible working hours</td>
</tr>
<tr>
<td>• Temperature testing</td>
</tr>
<tr>
<td>• New COVID safety procedures</td>
</tr>
<tr>
<td>• The company distributed information about the Pilot Peer Support Programme</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2: Outside Services (Paid for)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Counselling with Psychologist</td>
</tr>
<tr>
<td>• Phone line counselling support</td>
</tr>
<tr>
<td>• Physical health support / GP/Medical Assistance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3: Referral Non Company Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Peer Assistance Network (PAN)</td>
</tr>
<tr>
<td>• Mindfulness apps</td>
</tr>
</tbody>
</table>

Focus on EAP, Peer Support & Training
Examples of Support (COVID)

Wordcloud Frequency 10
Examples of Support (COVID)

Wordcloud Frequency 20
5. Problem Space, Stakeholders & Wellbeing Culture

Defining/understanding the problem

Identifying and testing solutions

Choosing and implementing a solution

Org supports are provided – suitability/fit for purpose?

Roles & responsibilities need consideration

Wellbeing Culture?

COVID Context & Need for Support

Culture, Values & Leadership?

Need to embed wellbeing
- Training
- Occupational health and support
- Safety/Risk
- Flight Planning/Rostering

Need other solutions/ change existing approach...
Peer Support
Have you ever spoken to someone about a MH issue you are experiencing or have experienced?
Did you willingly disclose it to your employer?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pilots</strong> (n=258)</td>
<td>20%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>CCM</strong> (n=198)</td>
<td>15%</td>
<td>70%</td>
</tr>
<tr>
<td><strong>ATC</strong> (n=89)</td>
<td>20%</td>
<td>55%</td>
</tr>
<tr>
<td><strong>MX</strong> (n=58)</td>
<td>10%</td>
<td>55%</td>
</tr>
</tbody>
</table>
If you were feeling anxious or depressed, who would you talk to?

- Partner/Spouse
- Family
- Friend
- Medical
- Work colleague
- Line Manager
- PSP
- HR/EAP/OH
- Nobody

Diagram shows the percentage of people who would talk to each category, with 'Partner/Spouse' being the highest and 'Nobody' being the lowest.
If you were feeling anxious or depressed, who would you talk to?

- Work colleague
- Line Manager
- PSP
- HR/EAP/OH
- Nobody

Pilots: CCM | ATC | MX
Would you disclose it to your employer?

- Yes
  - Pilots (n=388)
  - CCM (n=148)
  - ATC (n=110)
  - MX (n=78)

- No
  - Pilots (n=388)
  - CCM (n=148)
  - ATC (n=110)
  - MX (n=78)
If you thought a work colleague had a serious mental health issue and might present a safety risk, would you report it?

- Yes
  - Pilots (n=646)
  - CCM (n=148)
  - ATC (n=110)
  - MX (n=78)

- No
Are you aware of the existence of a PSP within your organisation or staff representative group?

- Pilots (n=643)
- CCM (n=344)
- ATC (n=198)
- MX (n=135)

Yes | No
---|---
Pilots | 75% | 25%
CCM | 85% | 15%
ATC | 70% | 30%
MX | 45% | 55%
If needed, would you approach the PSP for peer support services?

- **Pilots**: 80.0% Yes, 20.0% No
- **CCM**: 50.0% Yes, 50.0% No
- **ATC**: 40.0% Yes, 60.0% No
- **MX**: 80.0% Yes, 20.0% No

Legend: Yes | No
If a PSP was in place and if needed, would you approach it for peer support services?

- Pilots: Yes 50%, No 51%
- CCM: Yes 70%, No 30%
- ATC: Yes 50%, No 50%
- MX: Yes 50%, No 50%
7. Stress Coping & Resilience
Stress Coping & Self Management

– People vary in relation to their ability to cope successfully with stress (including WRS)
– **The practice of healthy behaviours strengthens the person’s resistance to stress**
– Substitution of maladaptive coping with more adaptive coping
– Common stress coping strategies include exercise, the practice or relaxation techniques and seeking social support and/or social participation.
– **Resilience**

## 7. Stress Coping & Resilience

<table>
<thead>
<tr>
<th>#</th>
<th>When</th>
<th>Group</th>
<th>Method/What</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2015 to 2016</td>
<td>Pilots (N= 103)</td>
<td>Informal Interviews</td>
</tr>
<tr>
<td>2</td>
<td>2018</td>
<td>Pilots (N=33)</td>
<td>Workshops</td>
</tr>
<tr>
<td>3</td>
<td>2018/2019</td>
<td>Pilots (N= 1,059)</td>
<td>Wellbeing Survey</td>
</tr>
<tr>
<td>4</td>
<td>2019/2020</td>
<td>Aviation stakeholders (N=15)</td>
<td>Workshops/Interviews</td>
</tr>
<tr>
<td>5</td>
<td>August 2020</td>
<td>All aviation workers (N=2050)</td>
<td>COVID Survey</td>
</tr>
</tbody>
</table>
7. Stress Coping & Resilience

Coping with the stress and anxiety of the COVID-19 Pandemic
(1) in work, (2) lost job/off work, (3) returning to work

3. Wellbeing Survey 2018/2019

5. COVID Survey 2020
Using CS Manage WRS

- TCD (2020) – All Workers
- TCD (2020) – Pilots
- TCD (2019) – Pilots
2020 (COVID)

- Not all pilots are suffering
- Nearly 60% are using coping mechanisms to manage WRS and its impact on wellbeing
- Pilots using coping mechanisms were found to have lower depression severity levels.

- All stress cannot be removed from the work life of pilots.
- A high stress situation is not always detrimental for a person’s wellbeing.
- The use of coping strategies enables a person to manage WRS in a healthy manner and build resilience.

Exercise
Diet
Sleep
Relaxation
Talking about stress
Professional supports
Talk with colleagues
Talking with family & friends

Number of pilots

Frequency
- Daily
- Several times per week
- Once per week
- 2-3 times per month
- Once per month or less

## Adaptive & Maladaptive Coping (Survey, 2018/2019)

<table>
<thead>
<tr>
<th>Adaptive</th>
<th>Maladaptive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Try to do things I enjoy (eating out, watch TV, hobbies, nature/outdoors etc.)</td>
<td>Taking time off work</td>
</tr>
<tr>
<td>Socialise/spending time with family &amp; friends</td>
<td>Taking ‘me time’</td>
</tr>
<tr>
<td>Take exercise/sport</td>
<td>Keeping journal</td>
</tr>
<tr>
<td>Manage my diet and nutrition</td>
<td>Positive thinking</td>
</tr>
<tr>
<td>Focus on sleep &amp; rest</td>
<td>Using mobile apps</td>
</tr>
<tr>
<td>Use specific relaxation-focus behaviour (e.g. yoga, meditation, massage etc.)</td>
<td>Use Computer Based Tools (as part of a clinical support programme)</td>
</tr>
<tr>
<td>Talk about my stress</td>
<td>Intimacy/sexual activity</td>
</tr>
<tr>
<td>Read books about stress management</td>
<td>Prayer/spirituality</td>
</tr>
<tr>
<td>Use professional/organised supports</td>
<td>Keep busy</td>
</tr>
<tr>
<td>Holidays</td>
<td>Volunteering</td>
</tr>
<tr>
<td>Moving to Part/Time working arrangements</td>
<td>Be prepared for work</td>
</tr>
<tr>
<td></td>
<td>Avoidance/Ignore</td>
</tr>
<tr>
<td></td>
<td>Smoking</td>
</tr>
<tr>
<td></td>
<td>Substance misuse - alcohol</td>
</tr>
<tr>
<td></td>
<td>Substance misuse - drugs</td>
</tr>
<tr>
<td></td>
<td>Temper/lash out/aggressive behaviour</td>
</tr>
<tr>
<td></td>
<td>Self-harm</td>
</tr>
<tr>
<td></td>
<td>Withdraw from people</td>
</tr>
<tr>
<td></td>
<td>Disordered eating</td>
</tr>
<tr>
<td></td>
<td>Screaming/throwing things/tantrums</td>
</tr>
<tr>
<td></td>
<td>Crying</td>
</tr>
</tbody>
</table>
Adaptive & Maladaptive Coping (Survey, 2018/2019)

- Have a life outside flying.
- Being outdoors for even just a short walk, even in winter/bad weather and on short layovers
- Try to read books on staying positive. And I day dream about winning the lottery so I can quit being a pilot.
- Sleep more. Go back to bed after school run
- At my home you will not find anything aviation-related. Not reading anything about my company during off time.
- Creating connection with colleagues by personally offering emotional health courses
- Deep breathing, positive self talk.
- Cigarettes, sex
- Bitch

alcohol  avoid  away  better  books
breathing  change  comedy  company
completely  current  days  dog  drink
drink  eating  end
enjoy  exercise  feel  focus  games
exercise  feel  focus  games
help  hobbies  job  keep  life
listening  management  mindfulness
music  occasional  organizing  outside  partner
personal  phone  pilot  play  positive
problems  others  positive  play
prepared  problem  play  positive
self  short  sleep  sport  social
something  spend  sport  sport
stay  stress  support  switch  taking
talking  techniques  things
thinking  things  walking  watch
work  years  yoga
Coping Strategies & Depression Severity

The 3 coping strategies associated with odds of having a higher depression severity level are:
1. Discussing WRS with colleagues 2-3 times a month
2. Focusing on relaxation behaviour once a week
3. Focusing on relaxation behaviour several times a week

The coping strategies most associated with lower depression severity levels are
1. Focussing on sleep daily
2. Focussing on exercise several times a week
3. Focussing on exercise daily
4. Focussing on exercise 2 to 3 times a month
COVID Situation & Need for Resilience

**Pre COVID-19**, pilots experiencing WRS and wellbeing challenges

**COVID: OPERATIONAL SCENARIOS (FSF)**

1: In work

2: Off work

3: Going back to work

Is EASA IR/Guidelines Enough?
Have we the right tools to cope (Pilots, Airlines, Industry)?

How to Fly Straight & Level in Turbulent Times

Turbulent Times

An Aviation Professional's Guide to Wellbeing

Resilience & Wellbeing Journey

- **Resilience** is defined as the ‘demonstration of positive adaptation in the face of significant adversity
- It is a response to stressful circumstances, as opposed to a trait or capacity residing in the person (Fikretoglu and McCreary, 2012)
- **Process**
- **Wellbeing Journey** (FSF, 2020)

3. The Wellbeing Behaviours

- Exercise
- Sleep
- Activities
- Stress
- Diet
- Relationships

You’ve made it!
Now maintain it

4. The Wellbeing Toolkit

3 Wellbeing Questions

- How am I feeling?
- How am I coping?
- What can I do for myself and others?


## Wellbeing Management Across the Three Pillars

<table>
<thead>
<tr>
<th>Pillar</th>
<th>Example</th>
<th>How Am I Doing? Current Rating/ Status? (Good, OK, Poor)</th>
<th>What Can I Do to Improve this? What Am I Currently Doing to Improve this?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological</td>
<td>Sleep, Diet, Exercise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological</td>
<td>Attitude to life, Mood, Stress Management, Use of Coping Strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>Support network, social support</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Weekly/Daily Checklist

#### Weekly To Do

<table>
<thead>
<tr>
<th>AREA</th>
<th>MON</th>
<th>TUE</th>
<th>WED</th>
<th>THU</th>
<th>FRI</th>
<th>SAT</th>
<th>SUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sleep</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diet – Breakfast</td>
<td></td>
<td></td>
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<tr>
<td>Lunch</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Dinner</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Exercise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationships</td>
<td></td>
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</tr>
</tbody>
</table>
9. Research Roadmap & Next Steps

WHERE WE ARE

Pre 911
Germanwings (2015)
Pre COVID
Post COVID

Safety 0/Safety I
Wellbeing 0
Safety I
Wellbeing I

WHERE WE NEED TO BE

Wellbeing II
Safety II

Safety II.I

Lived Experience
Wellbeing Project
BIOLOGICAL - PSYCHOLOGICAL - SOCIAL

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin
Research Roadmap: Tools for Pilots, Airline & Industry

1: Pilot Tools (Self Management/Off Duty)
2: Pilot Tools (On Duty)
3: Tools for EAP
4: Tools for Aeromedical Examiners
5: SMS & Flight Planning/Rostering/Wellbeing Integration Tools

Self Management & Wellbeing-II
Research Roadmap: Tools for Pilots, Airline & Industry

[Images of mobile app designs for tracking and reporting wellbeing]

Trinity College Dublin
Coiláiste na Tríonóide, Baille Átha Cliath
The University of Dublin

Next Steps: Wellbeing Community & Virtual Challenge

1. Join a User Community
2. Survey on tools
3. Interviews
4. Participate in a wellbeing game/virtual challenge

In progress

For more information, please email cahilljo@tcd.ie

Or see: https://www.tcd.ie/cihs/projects/pilot-lived.php
Conclusions

- Aviation organisations need to rethink their objectives and approach in terms of providing appropriate wellbeing supports for those currently in work and off work.
- Those people who have lost their jobs and/or are experiencing MH difficulties require immediate support
- The roles and responsibilities of different stakeholders (i.e. workers, organisations, regulator, society/charities, government) in relation to managing wellbeing require rethinking and clarification.
- Aviation organisations need to address issues pertaining to their wellbeing culture – promoting healthy behaviour, supporting disclosure around mental health issues/challenges, promoting awareness of MH.
Conclusions

- Organisations and workers need to manage specific sources of stress (including work related stress) and anxiety, and specific impact of COVID 19 on aviation workers.
- Aviation workers across different roles are practising self-care – this should be encouraged at all levels – linking to promoting a wellbeing culture and safe behaviour.
- Need for peer support for all aviation workers – not just pilots.
- The regulator needs to address the timeline for new regulation in relation to the management of wellbeing and mental health for safety critical workers – this cannot be postponed any further.
The World Health Organisation have called for reliable information about mental health changes associated with the pandemic to be used by policymakers and service providers, so that decisions are underpinned by knowledge of the extent of changes in population mental health, and of who is most vulnerable to symptoms of mental distress.

Moving Beyond Compliance, Safety-II Approach & Solutions for Pilots & Airlines
Cognition, Technology & Work
https://doi.org/10.1007/s10111-019-00586-z

Stress Coping Booklet
Turbulent Times

The Requirements for New Tools for Use by Pilots and the Aviation Industry to Manage Risks Pertaining to Work-Related Stress (WRS) and Wellbeing...
https://www.mdpi.com/2227-7080/8/3/40

Lived Experience Wellbeing Project
aviationwellbeing@gmail.com
Supports

If you need to talk to somebody about this, we suggest you approach a close family member or friend, or a health professional such as your own Doctor.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samaritans</td>
<td><a href="https://www.samaritans.org">https://www.samaritans.org</a></td>
</tr>
<tr>
<td>EASA COVID-19 Support Material</td>
<td><a href="https://www.easa.europa.eu/community/content/covid-19-support-material">https://www.easa.europa.eu/community/content/covid-19-support-material</a></td>
</tr>
<tr>
<td>Aviation Action</td>
<td><a href="https://aviationaction.org/">https://aviationaction.org/</a></td>
</tr>
<tr>
<td>European Aviation Mental Well-being Initiative (EAM-WELL)</td>
<td><a href="http://eppsi.eu/">http://eppsi.eu/</a></td>
</tr>
<tr>
<td>European Pilot Peer Support Initiative</td>
<td><a href="http://eppsi.eu/european-aviation-mental-well-being-initiative-eam-well/">http://eppsi.eu/european-aviation-mental-well-being-initiative-eam-well/</a></td>
</tr>
<tr>
<td>RAeS</td>
<td><a href="https://www.youtube.com/watch?v=pT8uB7fVV44&amp;feature=emb_title">https://www.youtube.com/watch?v=pT8uB7fVV44&amp;feature=emb_title</a></td>
</tr>
<tr>
<td>Aerospace Medical Association (AsMA)</td>
<td>COVID-19 - Aviation Personnel and Mental Health Support (David Schroeder,2020)</td>
</tr>
<tr>
<td>American Psychiatric Association</td>
<td><a href="https://psychiatry.ucsf.edu/coronavirus/coping">https://psychiatry.ucsf.edu/coronavirus/coping</a></td>
</tr>
<tr>
<td>National Institutes of Health</td>
<td><a href="https://www.nih.gov/health-information/your-healthiest-self-wellness-toolkits">https://www.nih.gov/health-information/your-healthiest-self-wellness-toolkits</a></td>
</tr>
</tbody>
</table>

Acknowledgements

• Thanks to all the aviation workers who participated in our research so far.
• Thanks also to the following groups who have supported this survey/research
Thank You

Key Points

- Appropriate Wellbeing supports?
- Immediate support?
- Roles & responsibilities of stakeholders?
- Wellbeing Culture
- Need to manage specific sources of stress.
- Self-care.
- Peer Support for all.
- Regulations needed now