PILOT WELLBEING, STRESS COPING & RESILIENCE

Dr Joan Cahill
Captain Paul Cullen

Dr. Keith Gaynor - Prof Simon Wilson – Sohaib Anwer
Hazard Identification

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

Predictive & Reactive

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

Why do some pilots cope better than others? - Resilience

Change - solutions for pilots and industry?

3 Pillars of Health

- **Wellbeing**
- **Biological**
  - Sleep
  - Exercise
  - Diet
- **Psychological**
  - Attitude to life
  - Stress Management & Coping Techniques
  - Meaning & Purpose
- **Social**
  - Interpersonal relationships
  - Support Network

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.
What is happening with Pilot Wellbeing?

– Semi-structured informal interviews (n=103)
– Workshops (n=33)
– Interviews and workshops with industry stakeholders (n=7)
– **Anonymous online health questionnaire (n=1,059)**
  – Depression
  – Anxiety
  – Suicidal Ideation
  – Burnout
  – Disengagement
  – Emotional Exhaustion

Susceptibility vs Resilience

Wellbeing I vs Wellbeing II

Workshop Findings

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
- N/A
- Potential for Serious incident/Fatal Accident

Sources of Work Related Stress

- 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

- 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%

Pilot Lived Experience Survey & Stress Coping

– 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.
Pilot Lived Experience Survey & Stress Coping

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

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

[Graph showing the frequency of different stress coping strategies]

How to Fly Straight & Level in Turbulent Times

Turbulent Times

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)?

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)
Wellbeing, the Journey

1. My Wellbeing

2. Our Wellbeing

3. The Wellbeing Behaviours

- Exercise
- Sleep
- Activities
- Diet
- Relationships
- Stress
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>
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<tr>
<td>Psychological</td>
<td>Attitude to life, Mood, Stress Management, Use of Coping Strategies</td>
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<tr>
<td>Social</td>
<td>Support network, social support</td>
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## Weekly/Daily Checklist

### Weekly To Do

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<tr>
<th>AREA</th>
<th>MON</th>
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# Pilot Wellbeing Behaviour Model

1: Pilot Lived Experience
- Lived Experience & Issues
  - Sources of WRS
  - Health Outcomes

2: Impact Model & 6 Scenarios
- Relationship between WRS, wellbeing, performance & safety
  - Six Scenarios

3: Model of Coping
- Predictors of good mental health and wellbeing
- Regression model – strategies and depression outcomes

4: Behaviour Change: Motivations, Enablers & Barriers
- Motivations
- Enablers
- Barriers

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

Research Roadmap: Tools for Pilots, Airline & Industry

Self Management & Safety-II

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

Research Roadmap: Tools for Pilots, Airline & Industry

Next Steps: Wellbeing Community & Virtual Challenge

1. Join a User Community
2. Participate in a wellbeing game/virtual challenge?

- In progress
- For more information, please email aviationwellbeing@gmail.com
- Or see: https://www.tcd.ie/cihs/projects/pilot-lived.php

RAeS 2021 Conference Preview

- Present our latest research
- Solutions to support positive wellbeing for pilots
- Progress: wellbeing community
- Wellbeing challenge/virtual game

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<tr>
<th>Resources</th>
<th>Stress Coping Booklet</th>
<th>Aviation Professional's Guide to Wellbeing</th>
<th>Pilot Lived Experience Project</th>
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Questions

Wellbeing, the Journey

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Now maintain it