

Understanding Pilot Wellbeing, and Its Impact on Flight Safety

PILOT WELLBEING

- There is evidence that **Pilots are under stress and experiencing wellbeing/mental health problems**
- Currently, there is a **lack of awareness/understanding** about wellbeing/mental health issues for pilots
- Overall, the **relationship between Work-Related Stress (WRS), pilot wellbeing, pilot performance and flight safety** needs to be understood and supported at different levels
- **Safety is enhanced when a wellbeing/mental health issue is addressed**, as opposed to allowing it go undiagnosed and untreated
- People with wellbeing and mental health difficulties for the most part are perfectly able to continue to do their jobs, especially with support.

Sources of Work Related Stress (WRS)

Factors impinging simultaneously on more than one pillar are highlighted with an *

Biological	Psychological	Social
		Working irregular hours*
		Working anti-social hours*
		Working within the close confines of the cockpit*
		Divergence of values between management and pilots*
		Unnatural location of work environment (5 miles up in the sky – no supports/can't step out)*
Working long duties		Increased responsibility with reducing authority and support*
Difficulties accessing fresh, healthy food		Lack of engagement (management and pilots)*
Sedentary nature of working as a pilot		Perception of pilots possessing "The Right Stuff"*
Cockpit environment – air quality, oxygen levels, noise		Perception that pilots are "living the dream"*
		Time away from home*
		Not having a sense of home/never at home*
		Lack of certainty in relation to roster (changes)*
		Being contacted by work when off duty if staffing/roster issues*
		Managing and understanding cultural differences (international workforce)*
		Commuting lifestyle*
		Long working day in close contact with one other person (may or may not get on with)*
		Interpretation of the rules*
		Captain responsibility – never switch off
		Working inflexible / disruptive schedules
		Changing nature of the industry
		Inflexible annual leave allocations
		Automation and prolonged periods of low stimulation
		Ever-changing crew composition
		High training costs
		Stringent medical certification

BIOPSYCHSOCIAL MODEL PILOT LIVED EXPERIENCE



FIELD RESEARCH & VALIDATION WITH PILOTS

- Initial exploratory interviews with pilots (N=40)
- Validation of biopsychosocial model with pilots semi structured interviews with pilots (N=60)
- Literature review and further consolidation of biopsychosocial model
- Advancement of safety case and impact scenarios
- Validation of model, safety case and impact scenarios with pilots (3, workshops: N=33)



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SAFETY CASE & IMPACT SCENARIOS

#	High Level Scenario	WRS	Wellbeing Impact	Impact on pilot performance (when flying)	How often	Safety Outcome
1	Pilots mostly coping well	Any pillar – include fatigue, social isolation etc	Minor impact	Minor impact Sometimes performance degraded - might miss something like ATC instruction, but will notice and correct action	Frequent	None – pilot self corrects own actions
2	Pilots mostly coping well, but impacts on physical health (GI, musculoskeletal problems)	Mostly biological pillar	Minor impact - suffering in daily life	Minor impact Sometimes performance degraded - might miss something like ATC instruction, but will notice and correct action	Frequent	None – pilot self corrects own actions
3	Pilots experiencing difficulties but mostly coping – however, something gives on the day – potential for event but co-pilot acts as barrier – compensate for other pilot	Complex combination of personal factors, work factors and operational situation on the day	Significant/considerable impact	Loss of attention Impact on situation awareness, decision making and teamwork Protection of co-pilot means avoid safety critical scenario	Infrequent	Near miss Potential for safety event/accident, if not picked up by co-pilot
4	Pilots mostly coping well, but long-term impacts	Any pillar – include fatigue, social isolation etc	Long term impact on health – develop illness when on annual leave or when retire	N/A	N/A	N/A
5	Pilots not coping – impact on wellbeing –	Complex combination of personal factors and work factors	Significant impact - suffering in daily life – stop working – potential for serious MH issues including self-harm and suicide	N/A	N/A	N/A
6	Extreme cases – murder/suicide (Germanwings) – media attention - implication for safety – very rare – should not be the immediate focus	Potentially pre-existing MH issue	Major impact	Major impact	Rare	Potential for accident/fatal accident

NEXT STEPS

- Extensive **survey of European pilots** – measure wellbeing issues and get feedback on sources of **WRS**
- **Stakeholder workshops** focusing on how wellbeing issues might be addressed at (1) airline level, (2) pilot self-management level

