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Autumn M. Dawley  
*A. T. Still University*

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# Occupational Health and Safety for Commercial Pilots During the Coronavirus Pandemic



## Autumn Dawley OTDS

Faculty Advisor: Dr. Jyothi Gupta PhD, OTR/L, FAOTA  
Occupational Therapy Department. A.T. Still University, Mesa ,AZ

### BACKGROUND

The aviation industry has been growing with the number of aircraft pilots jumping from 590,038 in 2015 to 664,563 in 2019. With an increasing demand for distribution of cargo, a review of the effects of work-related stressors during the coronavirus pandemic and, further, a solution to increase the health and well-being of individuals in the industry is essential. The Federal Aviation Administration (FAA) addresses fatigue and routinely revises regulations which alleviate job stress; however, the coronavirus pandemic has added new stressors to the aviation industry.

### PURPOSE

The purpose of this study was to examine the impact of the pandemic on pilots perceived stress. In particular, the roll out of policies and lockdown procedures was of interest. The secondary objective of this study is to identify a role for occupational therapy in decreasing stress and burnout for this population.

### METHODS

**Site:** Remote/A.T. Still with collaboration with an airline's union chairman

**Procedure:** The survey was distributed online by the participating union chairmen. Informed consent was obtained once the participant opened the link. If the participant chose to opt out of the survey, they would not see any further questions. If the participant did choose to participate, they were prompted to the next questions. The survey was set up in a way where the participant was not forced to answer all of the questions that way they could move freely throughout the survey. While all participants answered the Likert scale questions in their entirety, several participants did not answer the free response questions.

**Inclusion criteria:** Commercial Pilot

#### Assessment Tools

##### Maslach Burnout Inventory-General Survey

- Measures burnout on a continuum across three subsets: exhaustion, cynicism, and professional efficacy.
- Includes 16 items rated on a 7-point Likert scale ranging from 0 (never) to (6) every day.

##### Pandemic Experiences and Perceptions Survey

- Assess experiences and perceptions during a pandemic period through five subsets including extent of impact, resources, risk perception, work life, and leadership.
- Includes 34 items: 32 Likert scale type questions and 2 free response.

### RESULTS

#### Pearson Correlation

Predictive variables	MBI-GS Exhaustion		MBI-GS Cynicism		MBI-GS Professional Efficacy	
	Correlation	P value	Correlation	P Value	Correlation	P Value
PEPS Impact Mean	<b>0.260*</b>	0.045	<b><u>0.331**</u></b>	0.010	<b>-0.274*</b>	0.034
PEPS Resources Mean	-0.197	0.131	<b><u>-0.451**</u></b>	0.000	<b><u>0.456**</u></b>	0.000
PEPS Risk Mean	<b><u>0.359**</u></b>	0.005	<b>0.302*</b>	0.019	-0.041	0.757
PEPS Work life Mean	<b>-0.422*</b>	0.001	<b><u>-0.569**</u></b>	0.000	<b><u>0.582**</u></b>	0.000
PEPS Leadership	<b><u>-0.396**</u></b>	0.002	<b><u>-0.536**</u></b>	0.000	<b><u>0.559**</u></b>	0.000

Bolded: \*. Correlation is significant at the 0.05 level (2-tailed).

Bolded and Underlined: \*\*. Correlation is significant at the 0.01 level (2-tailed).

#### Stepwise Regression: Unique Correlations

MBI-GS: Exhaustion	Standard Error
Constant	6.395***
PEPS Leadership Mean	-0.701***
R-squared	0.21
Adjusted R-Squared	0.20

MBI-GS: Cynicism	Standard Error
Constant	7.297***
PEPS Work Life Mean	-1.058***
R-squared	0.31
Adjusted R-squared	0.29

MBI-GS: Professional Efficacy	Standard Error
Constant	2.335***
PEPS Leadership Mean	0.324***
PEPS Work Life Mean	0.534**
PEPS Risk Mean	0.302**
R-squared	0.450
Adjusted R-squared	0.420

\*, \*\*, and \*\*\* indicate significance at 90%, 95% and 99% level respectively

### RESULTS CONT.

#### Maslach Burnout Inventory-General Survey

- The group means indicated that the group of participants was experiencing higher levels of exhaustion, cynicism, and professional efficacy than normative data.

#### PEPS Free Response Themes:

- What gave you hope during the pandemic? (n=38)
  - Social support (10), faith/religion (5), politics (2), and nothing at all (5)
- What would help you do your job? (n=39)
  - Schedule changes (10), communication from management (6), and nothing/moving on (7)

#### Additional Comment Themes

- Pandemic restrictions/ lockdown/quarantine has taken a toll on motivation
- Emotional and physical exhaustion is causing ill-health/weight gain/ not eating healthy/sedentary life/isolation which are all contributing to a decreased quality of life
- There has been an overreaction to the pandemic by governments/media and global community
- Pilots feel unsafe to discuss emotional health and mental health for fear of being let go

### LIMITATIONS

Limitations for this project include small sample size, limited demographic information collected, topic sensitivity, duration, and lack of baseline data.

### IMPLICATIONS FOR OT

The nature of work is changing, implying there is a need for a lessened focus on ergonomics in the workplace and a greater focus on mental health for this group of workers. Occupational therapists can begin by providing airline companies with evidence-based research on stress and fatigue reduction and advocate for policy change.

### CONCLUSIONS

- Mental health research for pilots is limited, but on the uprising
- Current research indicates a need for programs addressing burnout, fatigue, and stress
- There is a strong correlation between pandemic related factors and burnout
- Further research should focus on rates of burnout and fatigue for pilots with a larger sample size for better generalization

### ACKNOWLEDGEMENTS

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### REFERENCES

See provided reference list.