

Sleep and fatigue among Swedish commercial airline pilots

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Introduction

New EASA FTL (European Aviation Safety Agency flight time limitations) rules came into force February 2016 and were introduced to protect airline crew against fatigue. This study aims to evaluate the current severity of sleep and fatigue problems among Swedish commercial airline pilots.

Conclusion

Our results raise concern about the amount of sleep and recovery Swedish pilots get. Fatigue levels are high and contribute to in-flight errors. It cannot be ruled out that this poses an even bigger problem in the rest of Europe with a considerably more congested airspace than Sweden.

Results

Figure 1. Do you like your work as a pilot?

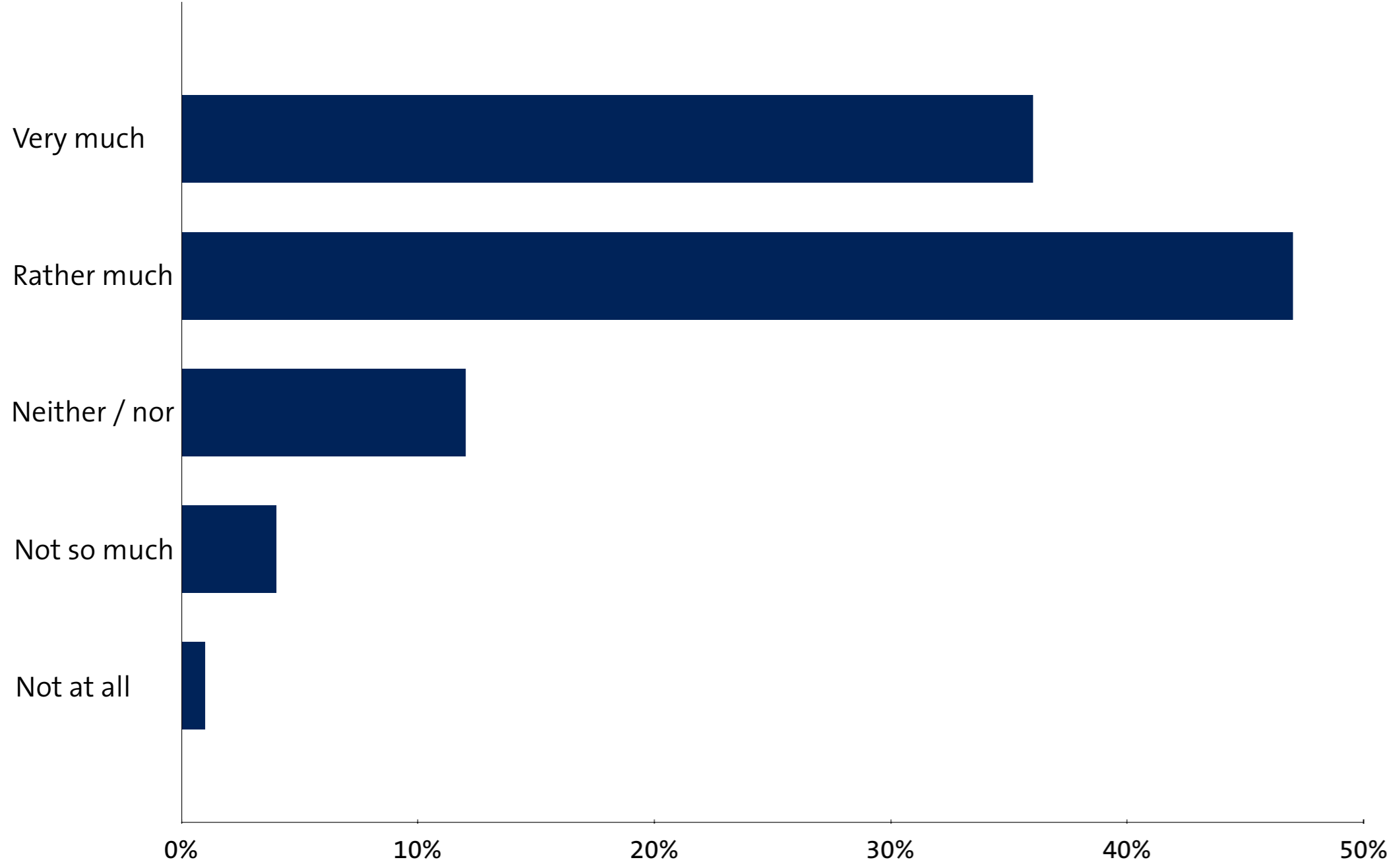
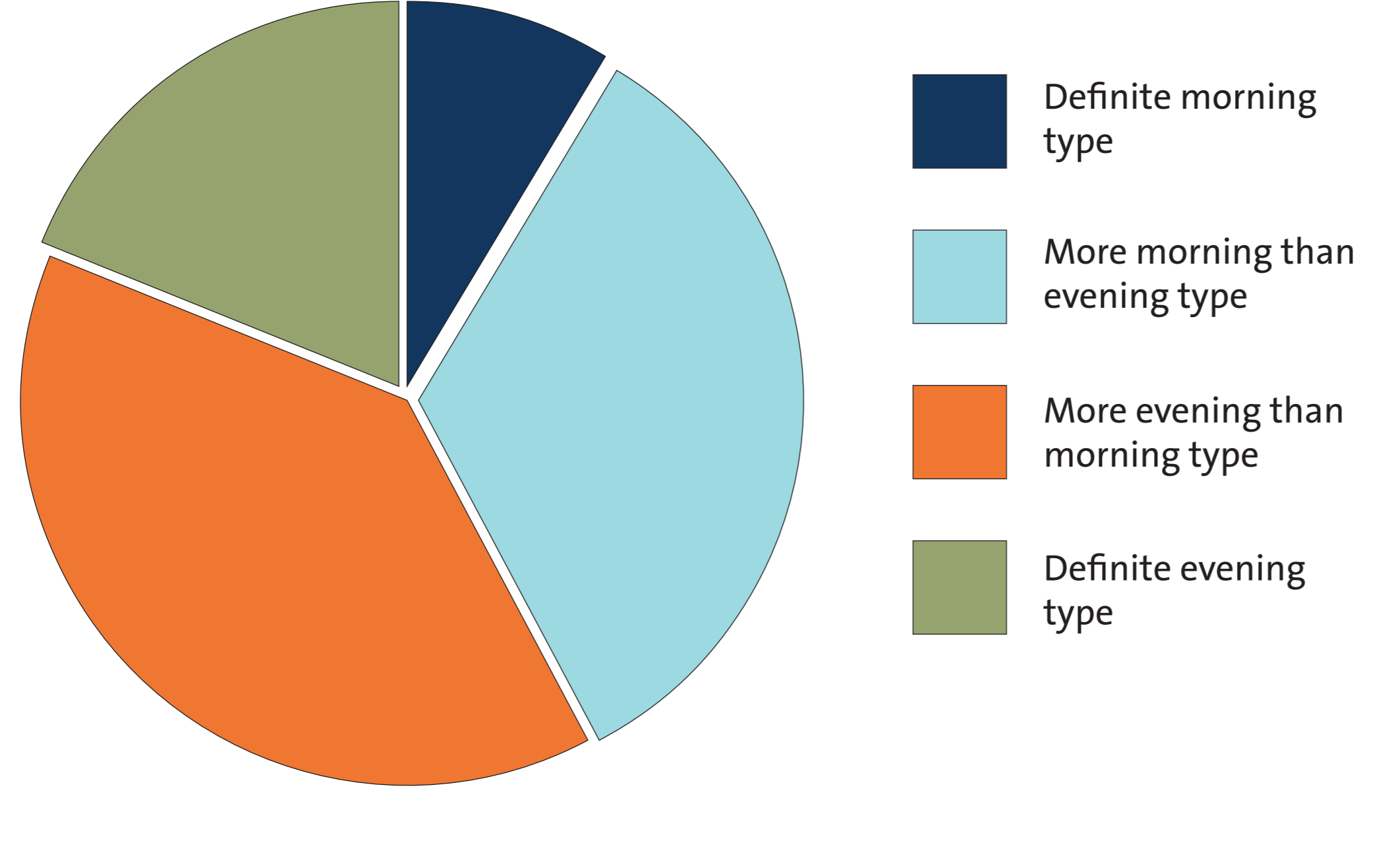


Figure 2. Are you a morning or evening type?



Short haul versus long haul pilots

	Short Haul (mean ± sd)	Long Haul (mean ± sd)	p
KSQ Sleep quality index (high values are better)	15.1 ± 3.6	14.2 ± 4.1	<.05
KSQ Fatigue index (high values are better)	24.9 ± 4.3	24.1 ± 4.7	n.s.
General sleep quality (1=very good to 5=very poor)	2.7 ± 0.9	2.9 ± 1.0	n.s.
Working hours disturb sleep (1=often to 3=no)	1.5 ± 0.5	1.3 ± 0.5	<.005
How big of a problem is disturbed sleep? (1=very litte to 5=very much)	3.3 ± 1.0	3.4 ± 0.9	n.s.
Sufficient sleep during working weeks (1=yes to 5=not at all)	3.0 ± 0.8	3.1 ± 0.9	n.s.
Working hours lead to severe fatigue (1=often to 3=no)	1.7 ± 0.6	1.8 ± 0.7	n.s.
Made errors/mistakes in cockpit due to fatigue (% yes)	86%	80%	n.s.

Method

A web survey was sent out to 975 pilots (all members of the Swedish Airline Pilots Association) who work under the EASA FTL rules; 598 (61%) completed the survey containing questions about working conditions, sleep, health, and fatigue. 92% of respondents were men, 96% had permanent employment, 73% worked full time as a pilot.

Future perspectives

Field studies using sleep/wake diaries and actigraphy are currently being carried out among randomly selected long- and shorthaul pilots working for Swedish airliners.