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Low to Normal
Stress
LF/HF < 1.6



Routine Activities
LF/HF = 2.4



Patient Contact
LF/HF = 2.95



Administrative
Activity
LF/HF = 3.10



Driving
LF/HF = 3.10



Giving Pt.
Report
LF/HF = 3.55



Performing
Procedures
LF/HF = 3.60



Dispatch
Communication
LF/HF = 4.00

INTRODUCTION

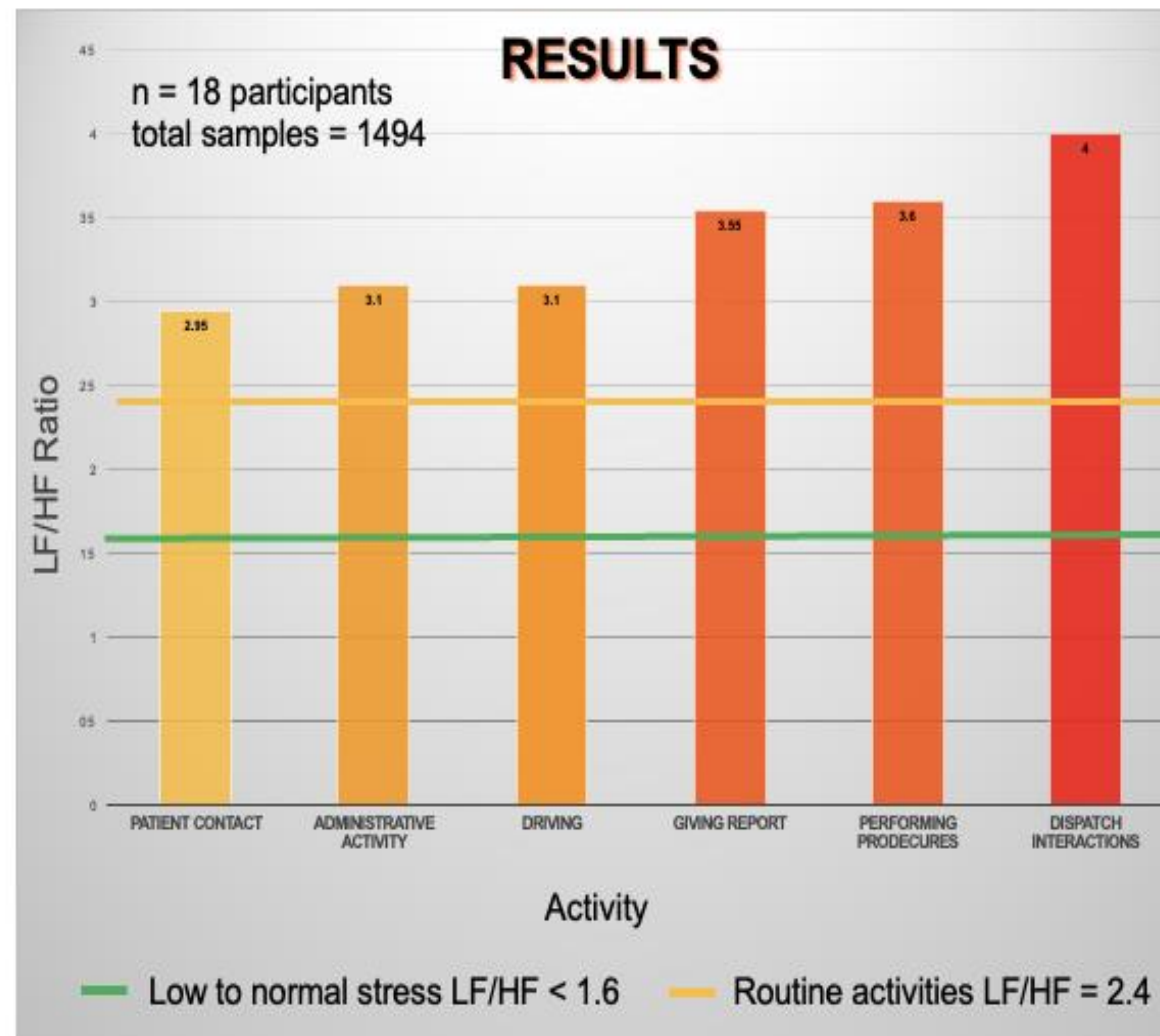
- ❖ HRV can be used to measure stress regarding sympathetic and parasympathetic nervous system interaction.

OBJECTIVE

- ❖ Determine what aspects of on-shift duties are most stressful to paramedics

METHODS

- ❖ Prospective observational study with 18 paramedics
- ❖ Pre-study questionnaire: demographics and perceived stress level
- ❖ 2-lead continuous heart rate monitor
- ❖ Observed during downtime and while on calls
- ❖ Participant events were recorded, and heart rate and low-frequency-to-high-frequency ratio (LF/HF) were determined.
- ❖ LF/HF ratio of greater than 1.6 is suggested to be indicative of moderate to high stress



Significant difference between each activity when compared to routine activities ($p < 0.001$).

Thank you to Pitt County EMS for your participation.

CONCLUSION

- ❖ Interactions with dispatch/radio communication was most stressful
- ❖ Patient contact was least stressful
- ❖ Baseline stressed while at work

LIMITATIONS

- ❖ Limited sample size
- ❖ Only 1 EMS system
- ❖ Inability to control personal intake of HRV modulators (ex: caffeine, medications)

FUTURE WORKS

- ❖ Monitor pre- and post-shift to look at baselines and recovery
- ❖ Compare other HRV metrics pNN50, SDNN, RMSSD & Baevisky's SI