



# **Convergence of Hogan Derailment Risk and Multisource Leadership Feedback in U.S. Navy Submarine Operations**

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# Disclaimer

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## Non-Disclosure

Dana Dilweg, MS has no conflicts to report.



# Background & Operational Context



Photo: U.S. Navy (NAVSEA)



Submarine operations involve unique leadership demands

- ✓ Extended deployments
- ✓ Confined living conditions
- ✓ Mission-critical decision-making



Effective Submarine leadership requires:

- ✓ Emotional regulation
- ✓ Sound judgment
- ✓ Effective team leadership



Leadership vulnerabilities may become more visible under stress

- ✓ Stress accumulates over time
- ✓ Interpersonal tensions are difficult to escape
- ✓ Leadership behaviors are highly visible



# Study Purpose & Research Questions

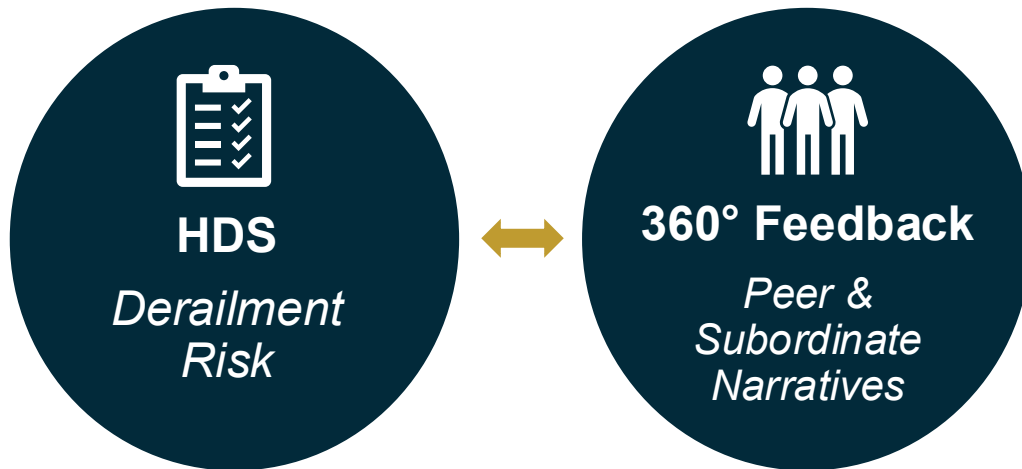
## Purpose

Examine convergence between Hogan Development Survey (HDS) derailment risk and behaviors identified in peer and subordinate narrative feedback.

## Research Questions

Do elevated HDS derailment risks predict observable leadership weaknesses?

Which derailment risks are most evident in peer and subordinate feedback?





# Participants, Measures, Analysis



## PARTICIPANTS

**$N = 146$**

U.S. Navy Submarine  
Officers

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Dept. Head level

Slated for Command  
Qualification



## MEASURES

### Hogan Development Survey (HDS)

- 11 leadership derailment risk scales
- Dark-side personality traits

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### 360° Leadership Feedback

- Peer narrative feedback
- Subordinate narrative feedback



## ANALYSIS

### 1. Prevalence Analysis

*Identify most common HDS risks*

### 2. Narrative Coding

*Dichotomous coding of HDS-related behavioral themes*

### 3. Binary Logistic Regression

*Test whether HDS risks predict behavioral themes*

**OBJECTIVE:** Determine whether elevated HDS derailment risk is reflected in observable leadership weaknesses



# HDS High-Risk Prevalence

*(Percentage of Officers with “High-Risk” Scores)*

| Scale     | Definition                                      | % High Risk |
|-----------|-------------------------------------------------|-------------|
| Reserved  | Detached and socially withdrawn                 | 31.5%       |
| Cautious  | Hesitant to take risks                          | 28.8%       |
| Leisurely | Cooperative on the surface, privately resistant | 28.8%       |
| Diligent  | Perfectionistic and overly meticulous           | 22.6%       |
| Excitable | Reactive under pressure                         | 21.2%       |



# Behavioral Themes

## Coding Approach

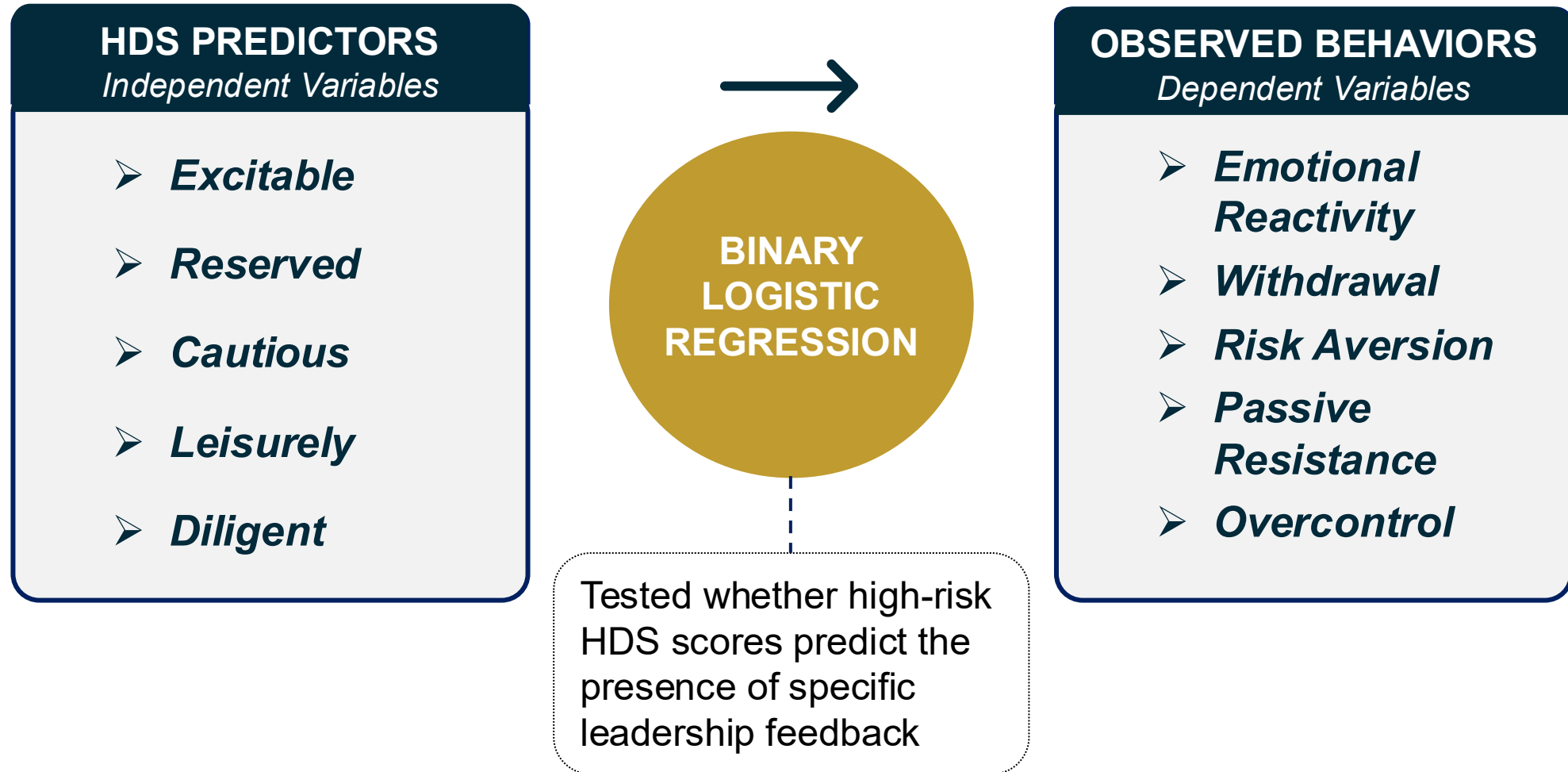
Narrative comments were coded for the presence (1) or absence (0) of predefined behavioral themes.

| HDS Scale        | Behavioral Theme            | Example                                                                                                                          |
|------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Reserved</b>  | <b>Withdrawal</b>           | "At times WEPS feels unapproachable which hinders me from going to receive help from him/or getting check outs from him."        |
| <b>Cautious</b>  | <b>Risk Aversion</b>        | "Reacts poorly to changes in plans. Very risk averse. Tends to fixate on the small issues while missing the larger picture."     |
| <b>Leisurely</b> | <b>Passive Resistance</b>   | "It is very obvious when he is doing something he does not like/believe in."                                                     |
| <b>Diligent</b>  | <b>Overcontrol</b>          | "Has a tendency to micromanage day to day operations rather than empowering the senior leadership to manage their own programs." |
| <b>Excitable</b> | <b>Emotional Reactivity</b> | "He wears his emotions on his sleeve... he can become visually upset which can have a trickle-down effect to the sailors."       |





# Binary Logistic Models







# Significant Findings



## SIGNIFICANT ASSOCIATIONS

*Binary Logistic Regression Results*



**Excitable**

**Emotional Reactivity**

OR = 2.46

2.5x more likely to display emotional reactivity under stress

**Passive Resistance**

OR = 1.52

1.5x more likely to engage in indirect resistance



**Reserved**

**Passive Resistance**

OR = 2.56

2.6x more likely to exhibit passive resistance



**Diligent**

**Emotional Reactivity**

OR = 1.50

1.5x more likely to display stress-driven emotional reactions

**Overcontrol**

OR = 1.74

1.7x more likely to exhibit micromanagement or overcontrol

## NO SIGNIFICANT ASSOCIATIONS



**Cautious**



**Leisurely**

*High-risk scores on these scale did not significantly predict any of the coded themes.*



# Discussion

## EVIDENCE OF CONVERGENCE



**HDS**



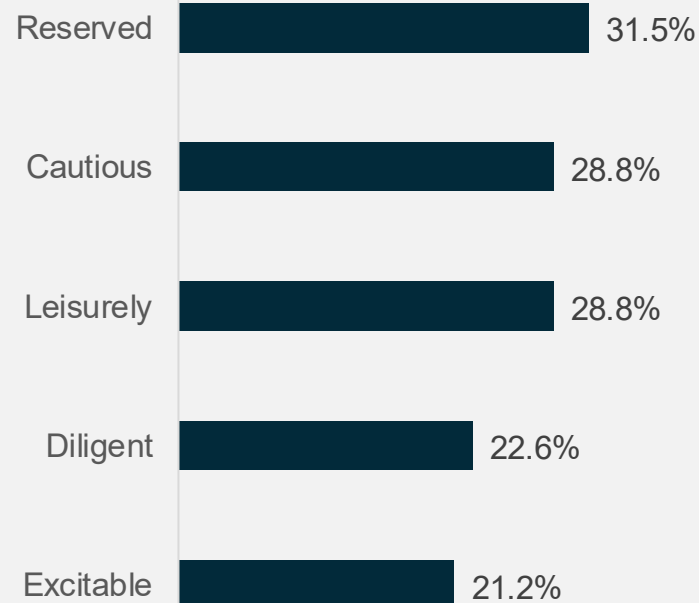
**360°  
Feedback**

Psychometric scores aligned with  
multi-source observations

### STRONGEST CONVERGENCE OBSERVED FOR:

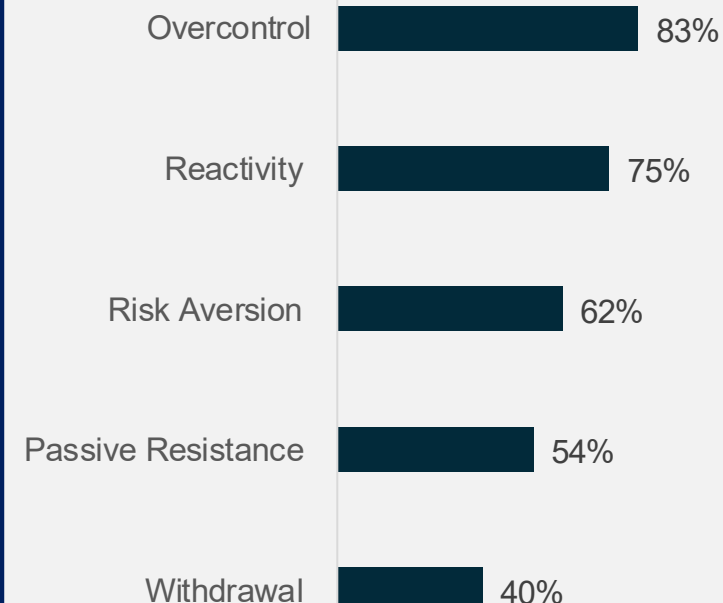
- ✓ Emotional Reactivity
- ✓ Passive Resistance
- ✓ Overcontrol

## Prevalence of High-Risk HDS Scores



## BEHAVIORAL THEMES IN NARRATIVE FEEDBACK

*Percentage of Leaders with ≥ 1 Indicator*





# Conclusions & Practical Implications



## KEY CONCLUSIONS

- ✓ **Derailment risk converges with observable leadership behavior**
- ✓ **HDS elevations reflect meaningful leadership vulnerabilities**
- ✓ **HDS and 360° feedback provide complementary perspectives**



## PRACTICAL IMPLICATIONS

### LEADERSHIP DEVELOPMENT

- *Early identification of leadership vulnerabilities*
- *More targeted coaching and development*
- *Integration of personality assessment with 360° feedback*

### OPERATIONAL READINESS

- *Strengthen leadership readiness*
- *Reduce stress-amplified leadership risk*
- *Improve resilience in high-accountability environments*

Personality derailment tendencies can be identified, observed, and mitigated.



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