
LAND AND WATER CONSERVATION SUMMIT

Caring for Fishers is Caring for Waters: Health, Equity, and Resilience in Rhode Island's Seas

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- URI College of Nursing Internal Funds
- Commercial Fisheries Center of RI
- Land & Sea Together
- RI Department of Environmental Management



Our Guest Speakers: Jody King

- Seasoned commercial shell fisherman known for his expertise in quahogging
- Eagle Scout and former US Marine
- URI alumn - agricultural resource technology
- Resilient figure in RI's maritime community
- Community leader and environmental advocate - serves on panels such as the Rhode Island Marine Fisheries Council and the Quahog Commission
- He teaches the public how to shellfish and has been a featured guest at local events → mission to safeguard Rhode Island's coastal resources for future generations



Our Guest Speakers: Fred Mattera

- Retired commercial fisherman with over 40 years of experience
- Executive Director of the Commercial Fisheries Center of RI
- URI alumn
- Receiver of the prestigious *National Fisherman "Highliner" Award* for his service and advocacy within the fishing community
- Advocate for maritime safety, providing Coast Guard-certified survival training to fishermen
- Founding member of the Commercial Fisheries Research Foundation (CFRF), helping bridge the gap between fishermen and scientists to improve sustainable fishing practices



Background & Significance



Credit: NOAA Fisheries

- > 50,000 jobs and billions of dollars in annual revenue generated in the US fisheries sector
- Commercial fishermen face higher risks than any other group of workers in the Blue Economy
- The health status of fishermen bears critical implications for the social, economic, and environmental dimensions of fisheries
- In 2022, commercial fishermen of RI were exclusively responsible for:
 - 107,343,094 dollars
 - 59,659,874 pounds

McCann J, Poli S, Kennedy S, O'Neill E, Robadue D, Kotowicz D, Allard-Cox M. The Value of Rhode Island's Blue Economy: A Report. Coastal Resources Center and Rhode Island Sea Grant College Program. 2020.

Sproul, T.W. and C.P. Michaud. "The Economic Impact of Rhode Island's Fisheries and Seafood Sector" December 13, 2018. Available at: <http://www.cfrfoundation.org/economic-impact-of-fisheries-in-rhode-island>

Rationale

- Commercial fishing in RI is a major economic driver - \$100 million in seafood landings annually
 - When including indirect impacts on processing, restaurants, and wholesalers, the economic contribution is estimated at over \$420 million, supporting more than 4,300 jobs
 - The health of these invisible workers holds significant implications for the social, economic, and environmental dimensions of fisheries, as it directly influences productivity (i.e., catch)
 - No public data is available on fishermen's health in RI or the US
 - Global evidence suggests elevated cardiometabolic risks, altered sleep patterns, and chronic stress in similar fishermen populations
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Methods: Study Protocol



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Health and behavior factors, quality of life and productivity among commercial fishermen in Rhode Island, US: a research framework

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Primary Outcomes

- **Ideal Cardiovascular Health** (AHA, 2022): health behaviors and health factors



Credit: American Heart Association (AHA)

- Sociodemographic and clinical characterization
 - Godin-Shephard Leisure-Time Physical Activity Questionnaire (GSLTPAQ)
 - Self-reported use of cigarettes or inhaled Nicotine-Delivery Systems (NDS)
 - Sleep duration and quality
 - Mediterranean Eating Pattern for Americans (MEPA)
 - BP, HR
 - BMI
 - Neck, waist and hip circumferences
 - Fish landings
-

Secondary Outcomes



Credit: NOAA Fisheries

- **Quality of Life:** World Health Organization Quality of Life – BREF (WHOQoL-BREF) → physical health, psychological well-being, social relationships, and environmental conditions
 - **Lifestyle:** The Simple Lifestyle Indicator Questionnaire (SLIQ) → dietary habits, physical activity, alcohol consumption, smoking, and stress
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Results: Phase 1

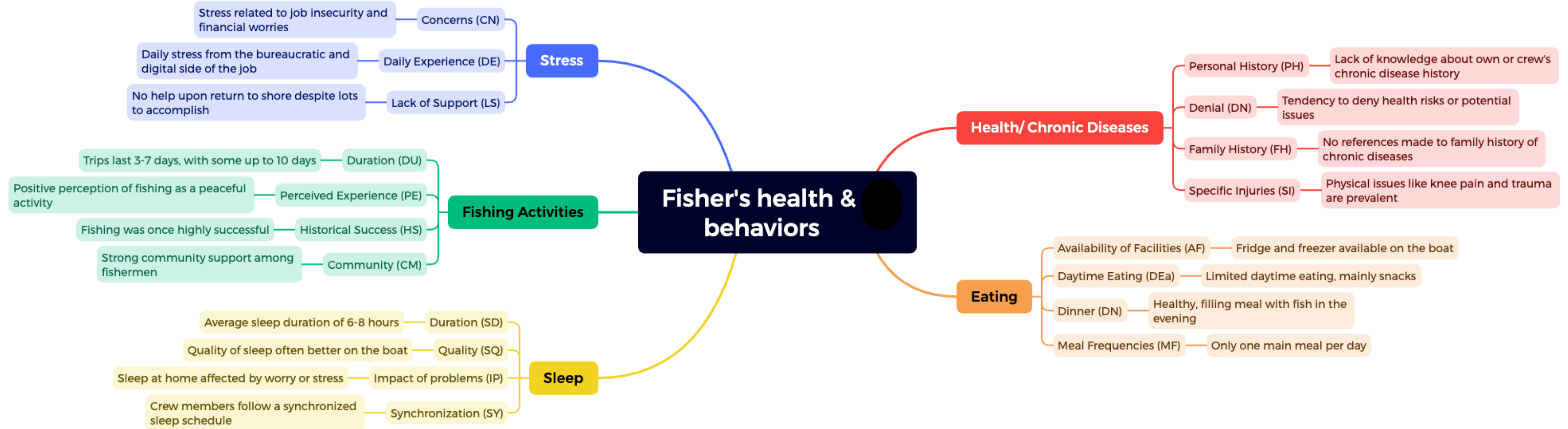


Figure 1. Emergent themes and coding - Fishermen's Lived Experiences (n=11).

Results: Phase 2

Table 1. RI Commercial Fishermen's Cardiovascular Health, Behavior & Productivity by CVH Status (n=59).

Variable	Ideal CVH (n=16)	Non-Ideal CVH (n=43)	p-value*
Age, years (Median, IQR [†])	45.2, 7.8	49.8, 8.2	0.12
Tobacco use (n (%))	2 (12.5)	24 (55.8)	<0.01
Alcohol use (n (%))	6 (37.5)	28 (65.1)	0.04
Met physical activity guidelines (n (%))	10 (62.5)	8 (18.6)	<0.01
Adequate fruit/veg intake (%)	11 (69.3)	6 (14)	<0.01
Workday sleep duration, hrs (Median, IQR)	6.2, 0.8	5.3, 0.7	<0.01
Insomnia/fatigue (n (%))	4 (25)	25 (58.1)	<0.01
High stress (n (%))	5 (31.3)	31 (72.1)	<0.01
QoL score (Median, IQR)	67, 11	48, 13	<0.01
Hypertension (n (%))	2 (12.5)	15 (34.9)	0.02
Overweight/obese (n (%))	5 (31.3)	23 (53.5)	0.03
Missed workdays due to illness (n (%))	2 (12.5)	17 (39.5)	0.02
Low/declining productivity (n (%))	1 (6.8)	12 (27.9)	0.03

*Mann-Whitney U test, [†]Interquartile Range



Thank you!

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