Predictors of Fatigue in Patients with Stable Coronary Disease

Michelle M. Fennessy, PhD, APRN, BC;

Holli A. DeVon, PhD, RN; Catherine Ryan, PhD, RN;
Julie J. Zerwic, PhD, RN

UIC COLLEGE OF NURSING
UNIVERSITY OF ILLINOIS AT CHICAGO

LOYOLA
UNIVERSITY CHICAGO
1870
AD · MAJOREM · DEI · GLORIAM

UCDAVIS
BETTY IRENE MOORE
SCHOOL OF NURSING

Disclosures

There are no conflicts of interest to disclose

Background- Fatigue Defined

- The universal symptom

- Physiological vs. psychological

- Relationship with stress, anxiety, & depression

Background

- Coronary artery disease (CAD) is the leading cause of death for women

- Fatigue is a common problem in cardiovascular populations

- Acute myocardial infarction vs. Stable CAD

Aim

- To evaluate whether fatigue in patients with stable CAD is predicted by gender, depressive symptoms, age, and prior history of heart failure
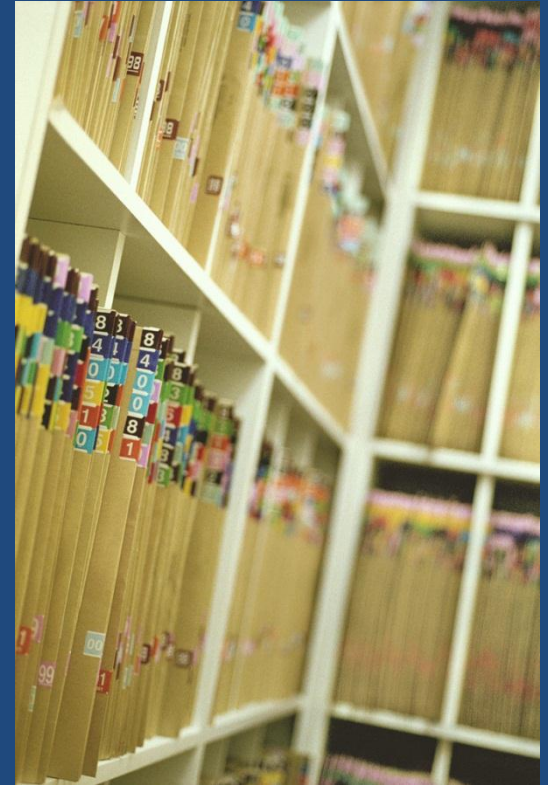
Methods- Sample

- 180 patients recruited from outpatient center in the United States

- Inclusion criteria

  - Treatment for stable CAD

  - Ages 35 years and over

  - Clinically recovered following coronary angiography

Methods- Instruments

- Demographic Questionnaire

- Medical Record Review

- Profile of Mood States (POMS)

Methods- Procedures

- Baseline survey instruments completed during hospitalization

- Survey instruments mailed to subjects 30 days after hospital discharge for follow-up data

Results-Demographics

Characteristic	Total (*n*=180)	Men (*n*=129, 71.7%)	Women (*n*=51, 28.3%)
Age years, (SD)	65.1 (8.3)	64.7 (8.0)	65.5 (8.7)
Treatment: PCI/OMT	50%	77.8%	65.6%
Treatment: OMT	50%	22.2%	34.4%
Caucasian	78.3%	78.3%	78.4%
African American	6.7%	4.7%	11.8%
Hispanic/Latino	10.0%	10.1%	9.8%
Married/Cohabitating	66.7%	76.0%	43.1%
Divorced/Widowed	30.0%	19.4%	56.9%*
Education< high school	6 (3.3)	6 (4.6)	0
Education≥ high school	174 (96.7)	123 (95.4)	51 (100)

*$p<.05$

Results: Demographics

Characteristic	Total (n=180)	Stents/Medical Therapy (PCI/OMT) (n=90)	Medical Therapy (OMT) (n=90)
Age years, (SD)	65.1 (8.3)	64.7 (8.0)	65.5 (8.7)
Gender- male	71.7%	77.8%	22.2%
Gender-female	28.3%	65.6%	34.4%
Caucasian	78.3%	77.8%	78.9%
African American	6.7%	8.9%	4.4%
Hispanic/Latino	10.0%	13.3%	6.7% *
Married/Cohabitating	66.7%	68.9%	64.4%
Divorced/Widowed	30.0%	31.1%	28.9%
Education< high school	6.6%	5.5%	7.7%
Education≥ high school	93.4%	94.5%	92.3%

$*p<.05$

Results: Subscale Comparisons

POMS Subscale	Study Sample Scores (SD) *n*= 180	MI mean sample scores (SD)[a] *n*= 116	Healthy Sample Males (SD) [b] *n*=204	Healthy Sample Females (SD) [b] *n*=42
POMS-Fatigue	12.8 (6.4)	13.0 (7.4)	**7.4 (5.7)***	**8.7 (6.1)***
POMS-Depression Dejection	7.7 (9.4)	**10.3 (9.9)***	7.5 (9.2)	8.5 (9.4)

[a] Published means by Fennessy et al. (2010)
[b] Published means by Neyenhuis et al. (1999)

*p<.05

Results: Baseline to 30-Day POMS Scores (Treatment)

Legend:
- PCI/OMT Baseline
- PCI/OMT 30-Day
- OMT Baseline
- OMT 30-Day

PCI/OMT *n*=48
OMT *n*=46
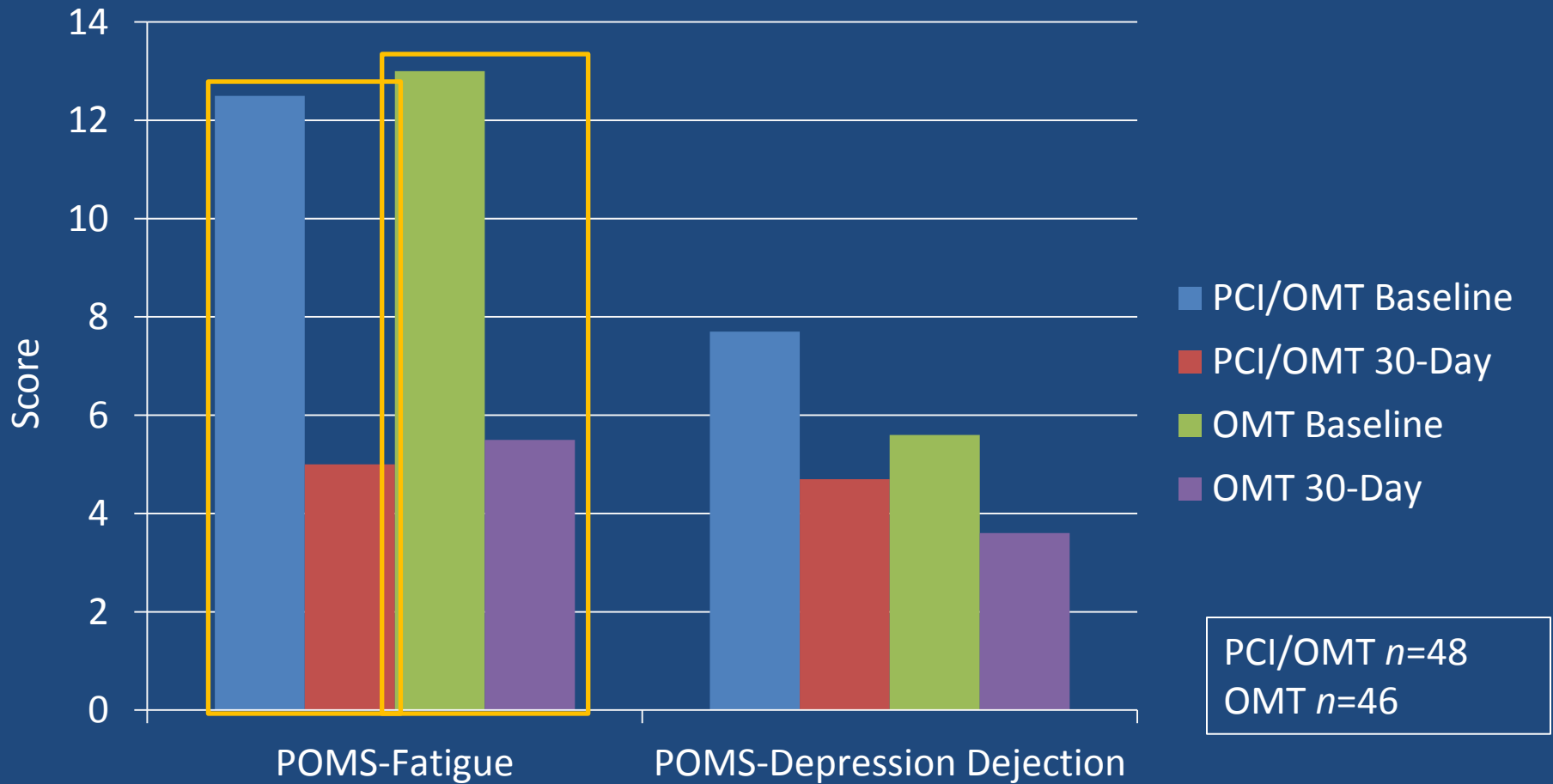
Results: Baseline to 30-Day POMS Scores (Gender)
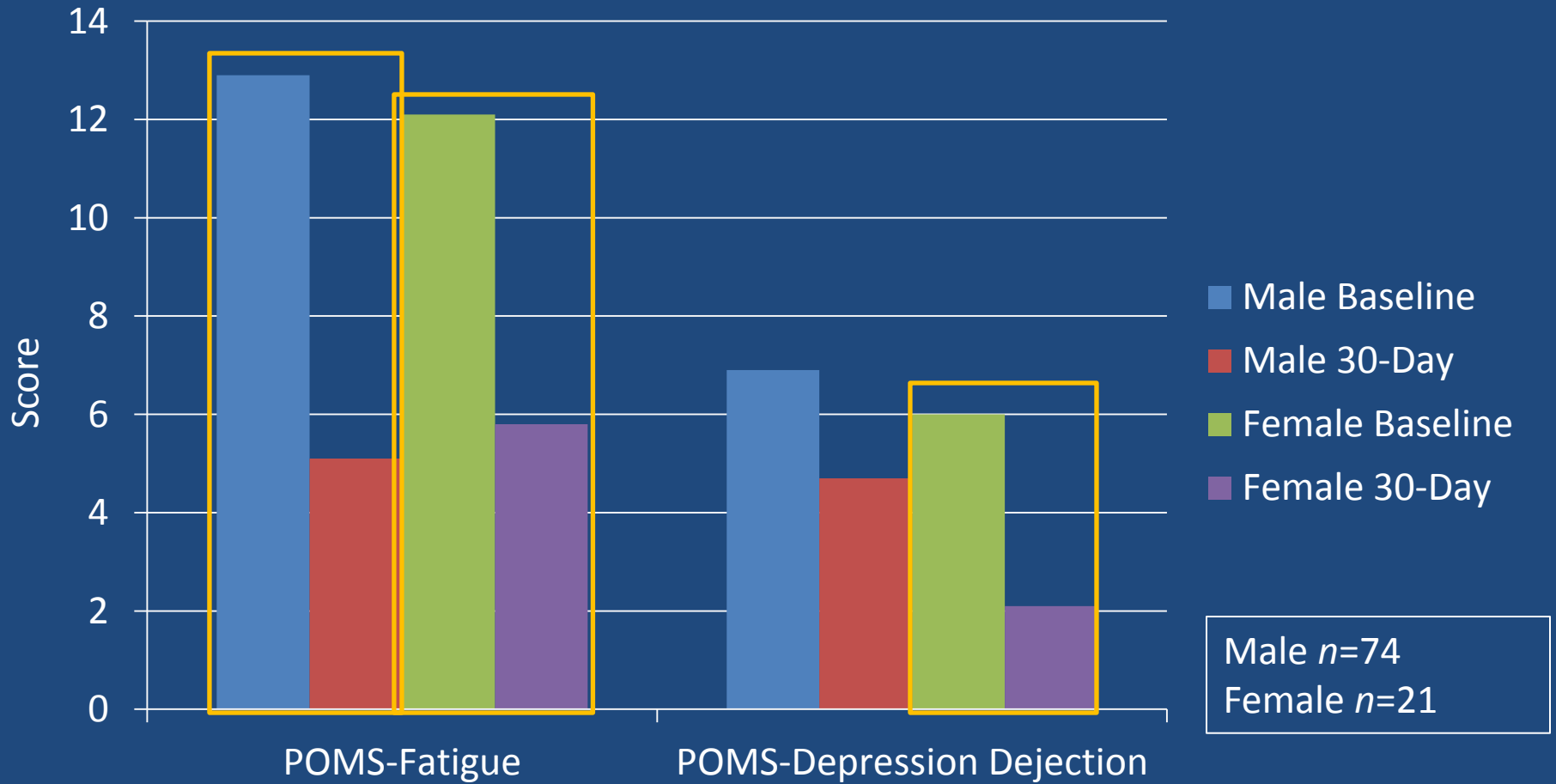
Results: Baseline Predictors of Fatigue

Source	Sum of Squares	*Df*	Mean Square	*F*	P value
Regression	1689.16	4	422.29	12.65	*<.01*

Predictor	Standardized Beta	*t*	P value
Gender	.257	3.60	<.01
POMS-Depression Dejection	.425	6.23	<.01
Age	.012	.169	.866
Prior Heart Failure	-.062	-.851	.396

*Model R squared=.224; Adjusted R squared=.207

n=180

Results: 30-Day Predictors of Fatigue

Source	Sum of Squares	*Df*	Mean Square	*F*	P value
Regression	530.84	4	132.71	10.02	*<.01*

Predictor	Standardized Beta	*t*	P value
Gender	.055	6.04	.547
POMS-Depression Dejection	.286	2.87	.005
Age	.468	4.81	<.05
Prior Heart Failure	.240	2.64	.01

*Model R squared=.308; Adjusted R squared=.277

n=95

Limitations

- Survey response rate at 30-days was 52.8% (*n*=95)

- Follow-up limited to 30-days after treatment

Conclusions

- Patients with stable coronary disease experience shifts in fatigue scores within the first 30-days after treatment

- Depressive symptoms and gender are associated with fatigue at baseline

Implications

- Understanding fatigue in men and women with stable CAD may:

    -Provide opportunity to develop tailored interventions with a focus on chronic disease management

    -Evaluate the impact of ongoing cardiac symptoms and adoption secondary prevention behaviors

Acknowledgements

- Dissertation committee: Julie Zerwic, PhD, RN; Dorie Schwertz, PhD, RN; Colleen Corte, PhD, RN; Hollie DeVon, PhD, RN, & Catherine Ryan, PhD, RN

- John J. Lopez, MD-Director of Interventional Cardiology Research, Loyola University Medical Center

Thank You

Michelle Fennessy, PhD, APRN, BC
Postdoctoral Fellow- University of California, Davis
Betty Irene Moore School of Nursing

Email: michelle@michellefennessy.com