Trajectories of Illness Intrusiveness Domains Following a Diagnosis of Breast Cancer

Stephanie Jean Sohl, Ph.D.

Postdoctoral Fellow

Wake Forest™
School of Medicine

Significance

- Breast cancer (BC) - most common cancer diagnosed in women in the US

- Persistent depressive symptoms experienced by 12-25% of women with BC (Burgess et al, 2005; Deshields et al., 2006)

- Most important predictor of depression in cross-sectional analysis of current sample - Illness Intrusiveness (Avis et al., Under Review)

- Important variable for proactively identify factors that are associated with depression

Illness Intrusiveness

- **Illness Intrusiveness:** how much a chronic illness disrupts important life domains

- **Illness Intrusiveness Rating Scale**

How much does your illness and/or its treatment interfere with your:

RELATIONSHIP WITH SPOUSE:

      1   2   3   4   5   6   7

Not Very Much   Very Much

(Devins et al., 1983; Devins et al., 2010)

Illness Intrusiveness Domains

- *Intimacy*: relationship with spouse, sex life

- *Instrumental*: health, paid work, active recreation, financial situation

- *Relationships and personal development*: family relations, other social relations, self-expression, religious expression, community and civic involvement, passive recreation

Objectives

To identify distinct trajectories of each domain of illness intrusiveness

To identify characteristics associated with trajectories

Trajectory Analysis

- Characterize individuals into groups based on patterns of change over time

- Capture heterogeneity masked by evaluating means

- Identify cut points for targeting interventions

Characteristics of Trajectory Groups

- **Contextual Factors**: Age, race, marital/partner status, educational status, presence of children under age 18 in the home, how hard to pay for the basics

- **Disease/Treatment Factors:** stage, type of surgery, chemotherapy, radiation, vasomotor symptoms, pain, fatigue

- **Psychological and Social Factors:** social support, perceived attractiveness, spirituality (meaning, peace, faith), optimism (optimism, pessimism)

Procedures

- Inclusion criteria
  - Women within 8 months of a breast cancer diagnosis
  - Stage I, II, or III
  - At least 18 years of age

- Data collection
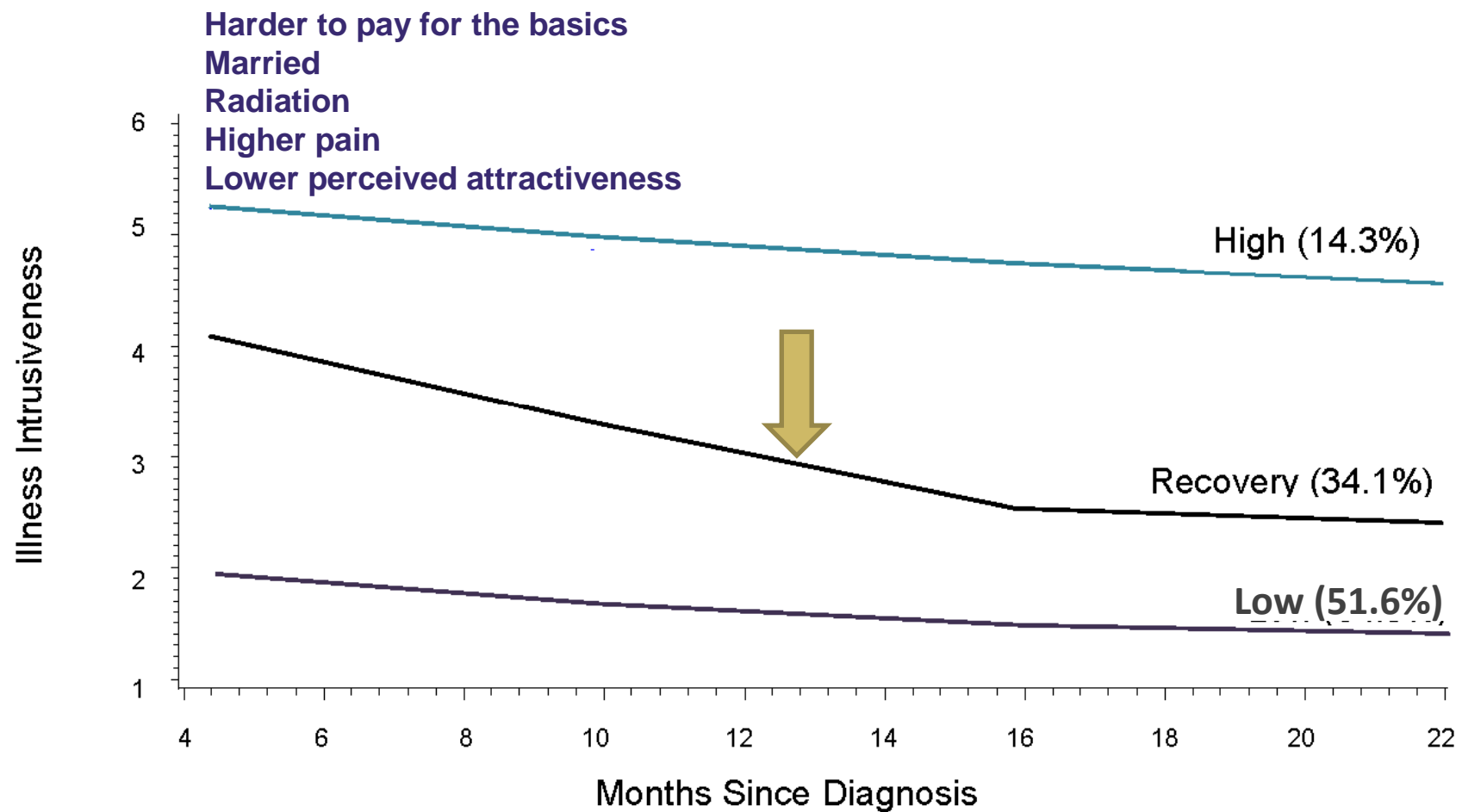 - Baseline, 6, 12, and 18 months after baseline

Analyses

- SAS finite mixture model procedure called TRAJ
  (Jones, Nagin, & Roeder 2001)

- Multivariate logistic regression analyses included all contextual, disease/treatment, psychological and social factors
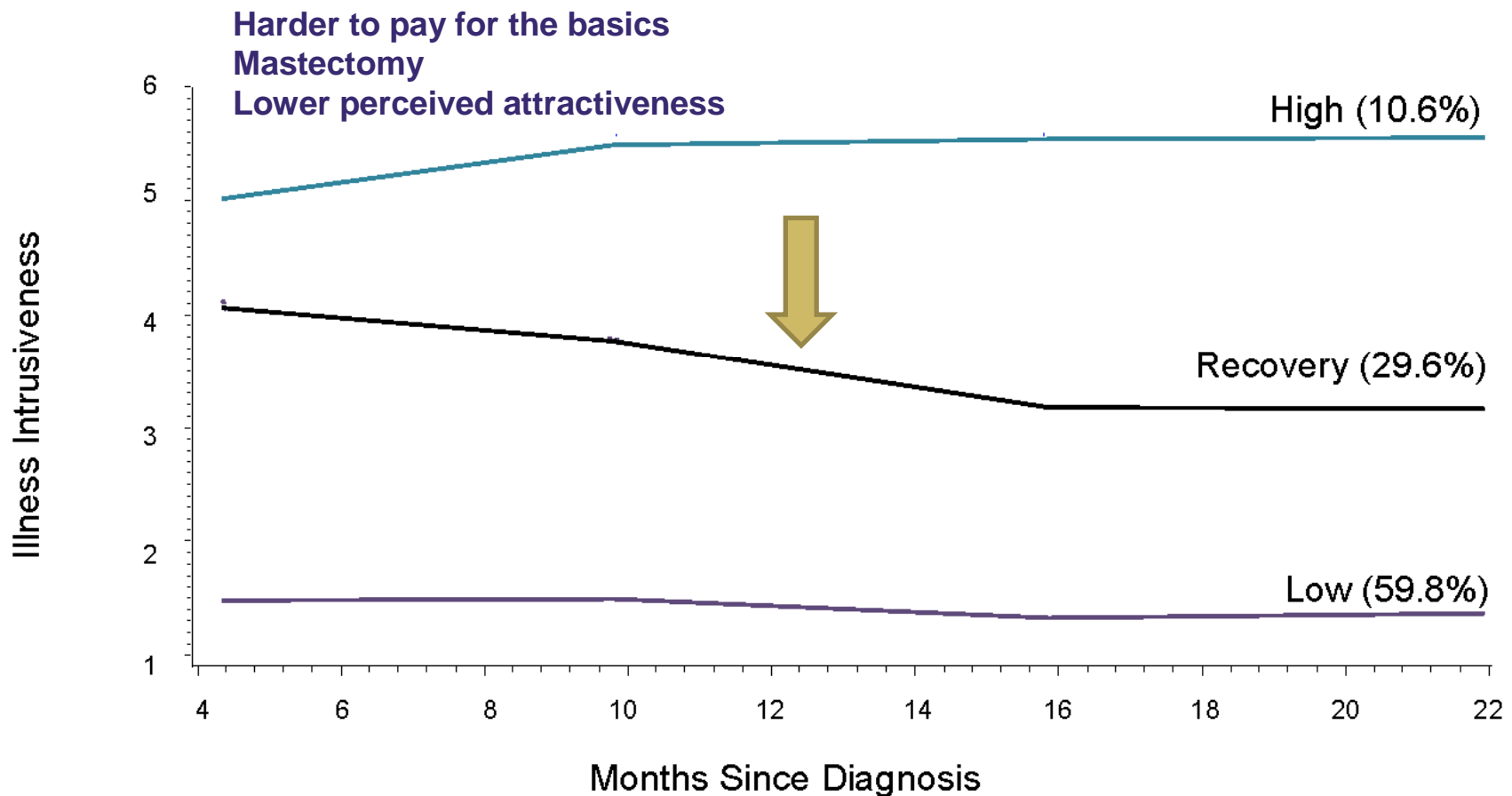
Participants (n=658)

	Total Sample (%)
Age: M(SD)	54.9 (12.6)
White	90
Currently Employed	42
Ability to Pay for the Basics	
Very Hard	3
Somewhat Hard	15
Not Hard	81
Graduated College	63
Married or Partnered	72
Children Under 18 Years	26
Stage	
I	52
II	40
III	8
Mastectomy	36
Chemotherapy	67
Radiation	72

Instrumental Domain (Health, paid work, active recreation, financial situation)
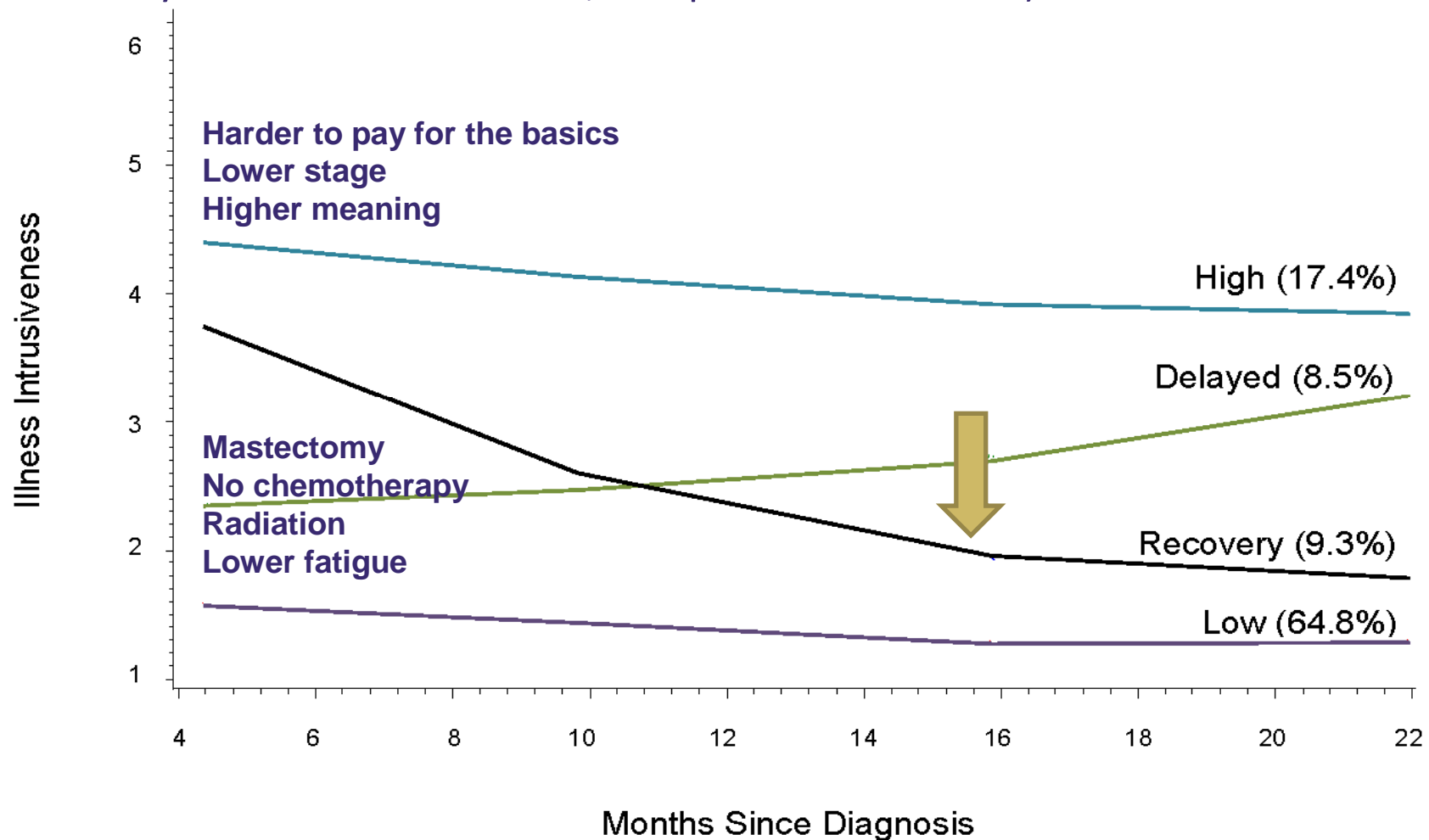
Intimacy Domain (Relationship with spouse, sex life)

Relationships and Personal Development Domain

(Family relations, other social relations, self-expression, religious expression, community and civic involvement, and passive recreation)

Harder to pay for the basics
Lower stage
Higher meaning

Mastectomy
No chemotherapy
Radiation
Lower fatigue

High (17.4%)

Delayed (8.5%)

Recovery (9.3%)

Low (64.8%)

Illness Intrusiveness

Months Since Diagnosis

Summary of Domain Characteristics

- Less ability to pay for basics - High trajectory of illness intrusiveness across domains

- Illness intrusiveness trajectories primarily explained by disease and treatment characteristics

- Potentially modifiable characteristics that uniquely distinguished between trajectories by domain:
  - Instrumental: Pain
  - Intimacy: Type of surgery
  - Relationships & Personal Development: Fatigue

Consistency of Trajectory Group

- 41.5% in the Low trajectory across all 3 domains
- 6.7% consistently in Recovery trajectory
- 3.2% consistently in High trajectory

- Approximately half of the participants did not follow the same trajectory across domains

Conclusions

- Multiple trajectories of illness intrusiveness emerged for each domain

- Trajectory patterns for each domain differed within participants

- Results support providing additional support for those who have difficulty paying for the basics

- An emphasis on symptom management may lessen illness intrusiveness

- Those who will get worse over time already report some level of intrusiveness at baseline

Acknowledgments

Collaborators:

Nancy E. Avis, Ph.D.

L. Douglas Case, Ph.D.

Suzanne C. Danhauer, Ph.D.

Beverly Levine, Ph.D.