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### Psychiatric Symptoms Reported by a Population-Based Sample of Rural Adults with Physical and Sensory Impairments

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## Background & Methods

People with physical and sensory impairments who live in rural areas experience higher rates of disability than their urban counterparts. At the same time, they have less access to services and supports to address both medical and disability related needs. Based on their circumstances, they may be at greater risk for mental health conditions; however, little is known about their mental health status.

### Study Purpose

- To examine the incidence of mental symptoms reported by a population based sample of adults with disabilities.
- To develop a brief screening instrument to identify adults with disabilities who are experiencing elevated mental health symptoms.
- To examine how this screening instrument performs over time.

### Sampling Frame

- Randomly selected 6000 households across three rural zip codes in MT, KS and CA (2000 each)
- Sent a letter in two waves about 3 weeks apart that had people self-identify disability status based on the

### American Community Survey (ACS) disability questions.

Do you:

- have serious difficulty walking or climbing stairs?
- have difficulty dressing or bathing?
- have difficulty doing errands alone such as visiting a doctor's office or shopping because of a physical condition?

Are you:

- Deaf or have serious difficulty hearing?
- Blind or have serious difficulty seeing even when wearing glasses?

- 3 survey waves collected (July, October, January)

- 190 people returned the post-card
- 166 returned a survey at any wave
- 128 (77%) returned all three surveys

### Demographics

Age = 54.4 years  
Years Education = 13.8

59.4% Women  
17.4% Veterans

### Race

82.8% Caucasian  
14% Native American  
3.6% other

### Health Conditions/ Impairments

68.8% Neck or back pain  
59.2% Arthritis  
45% Eye/vision problems  
42% Emotional problems  
33.8% Hypertension  
30.6% Fractures/joint injury  
22.9% Hearing problems  
21% Lung breathing problems

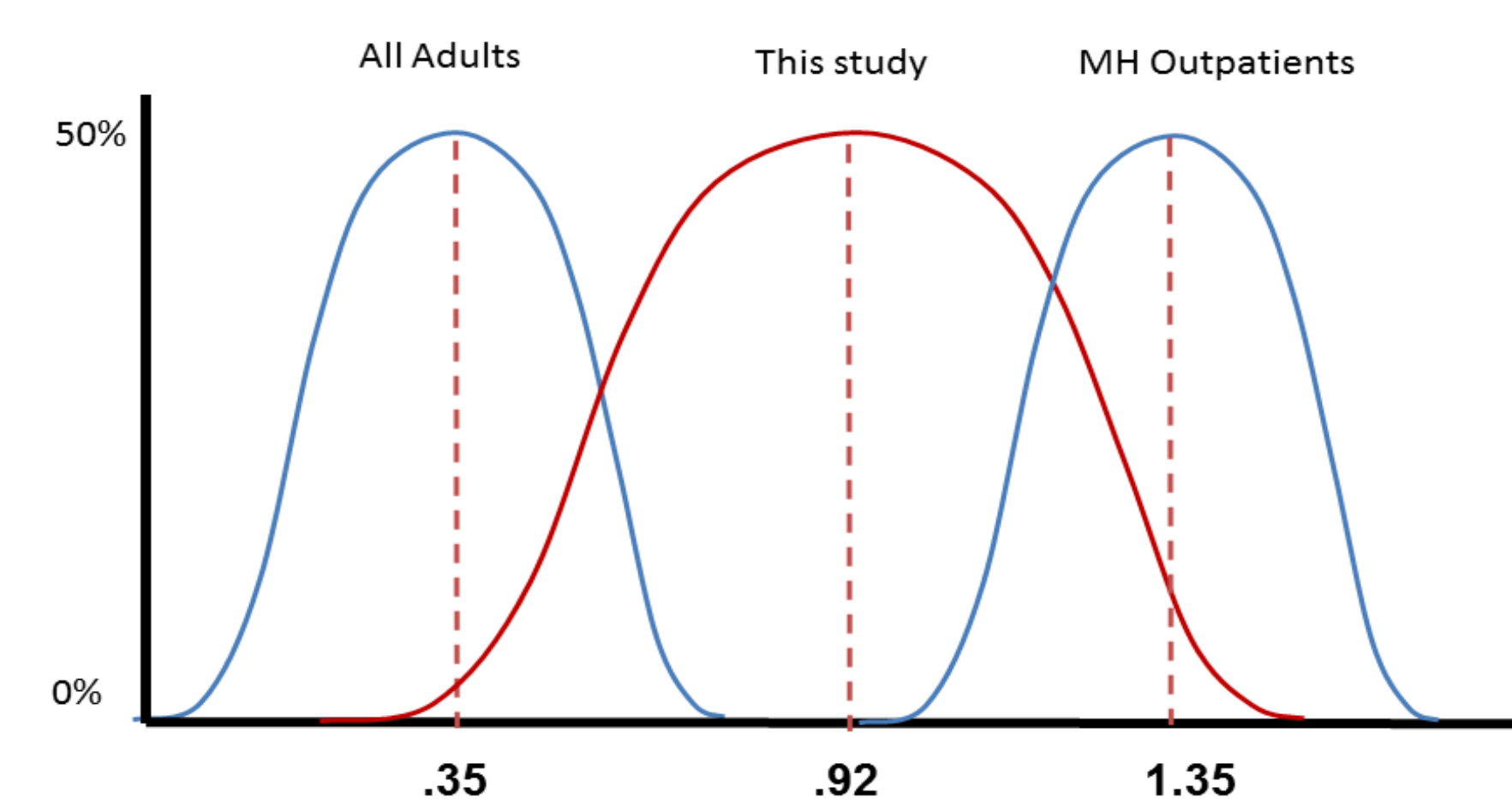
16.6% Diabetes  
14% Heart problems  
13.4% Spinal cord injury  
5.1% Stroke  
3.2% TBI  
2.5% Multiple Sclerosis  
33.1% Other

### Measures

- Symptom Checklist 90-R
  - General Severity Index (Average across all items)
- Health Related Quality of Life Module (HRQOL-14)
  - During the last 30 days, for about how many days have you felt:
    - Sad, blue or depressed (average = 10.9 days)
    - Worried, tense or anxious (average = 11.4 days)
  - Subjective health rating (5 point, average = 3).

## Results

### SCL-90 General Severity Index



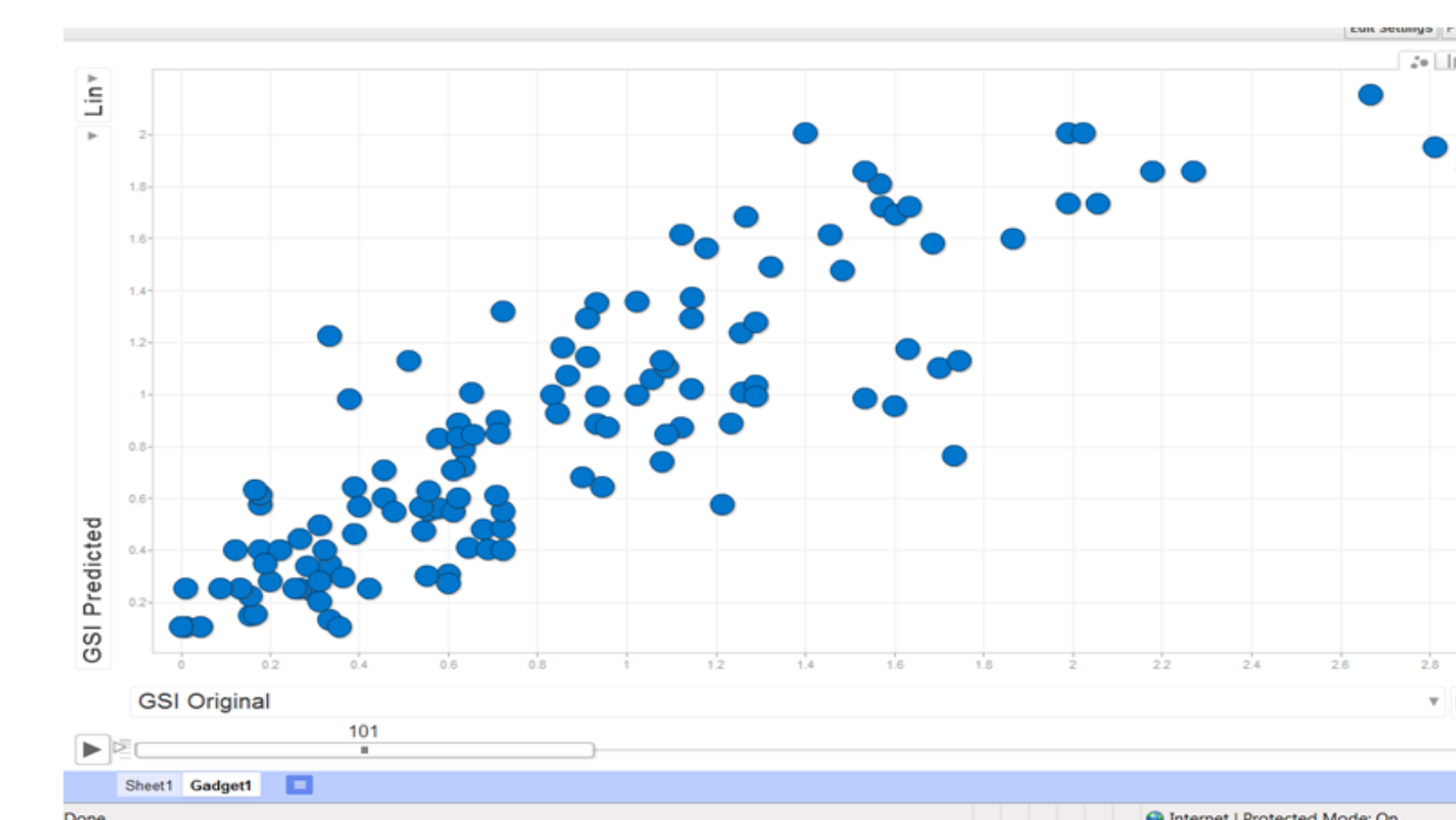
### Multiple Regression on GSI

Wave 1 Variables	Beta	t	p
Days of depression	.418	5.43	.000
Days worried tense or anxious	.365	4.83	.000
Overall health rating	-.228	-4.11	.000

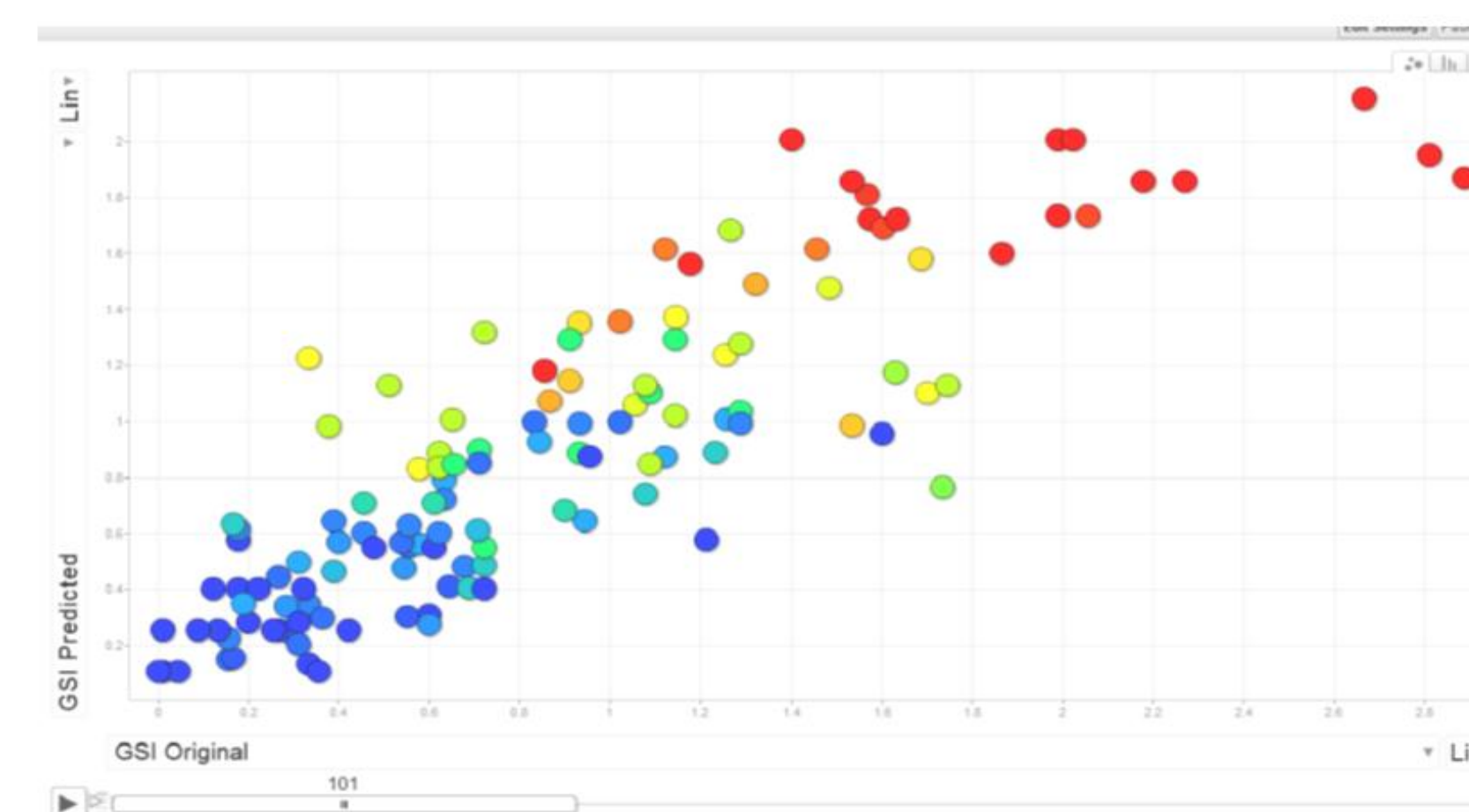
### Variance Predicted for Each Wave

Model	Wave 1	Wave 2	Wave 3
1. Depression, Anxiety, General Health	74.1%	59.5%	74.1%
2. Model 1 plus gender	75.2%	61.6%	74.4%

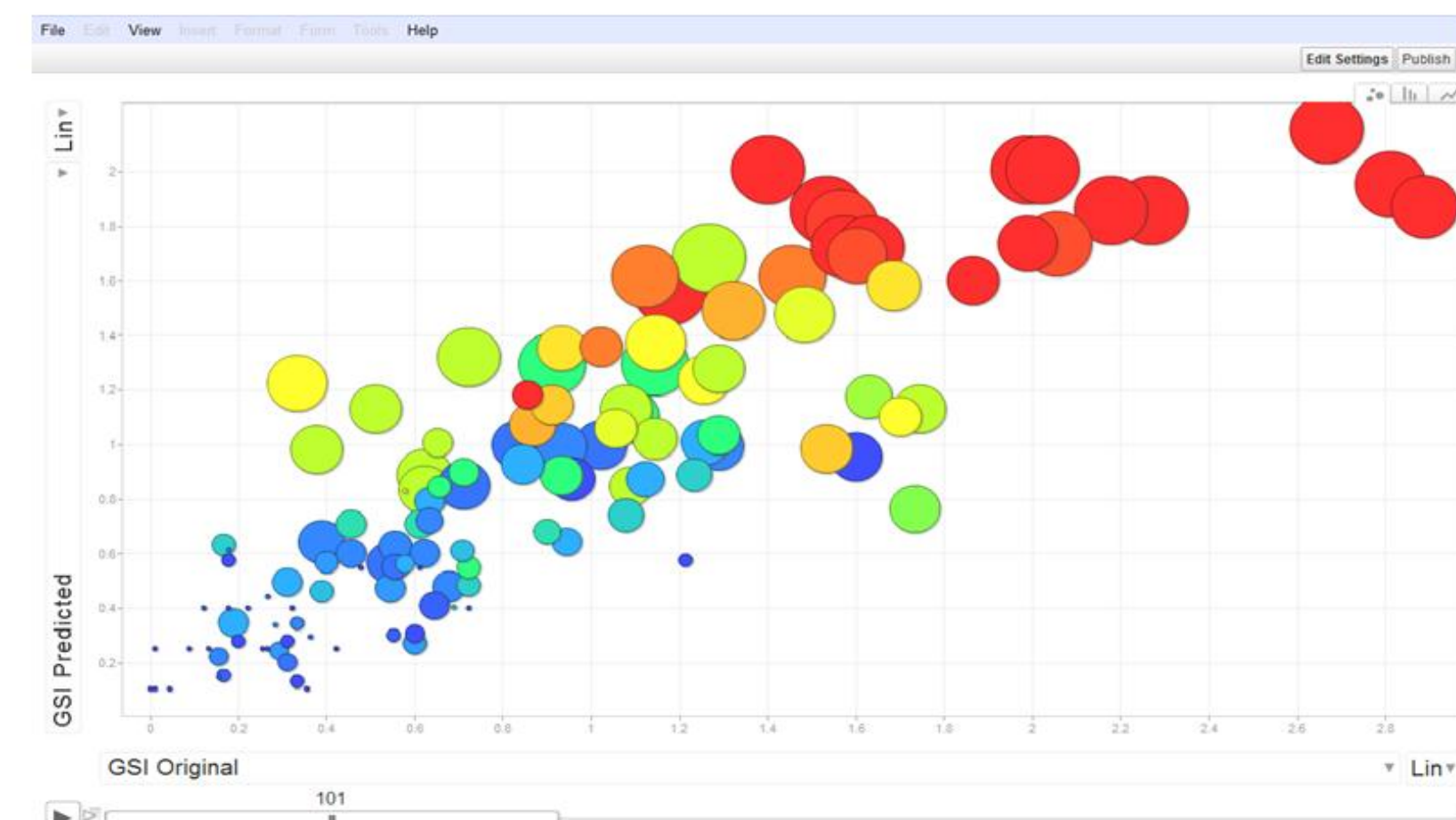
### Residual Error Variance



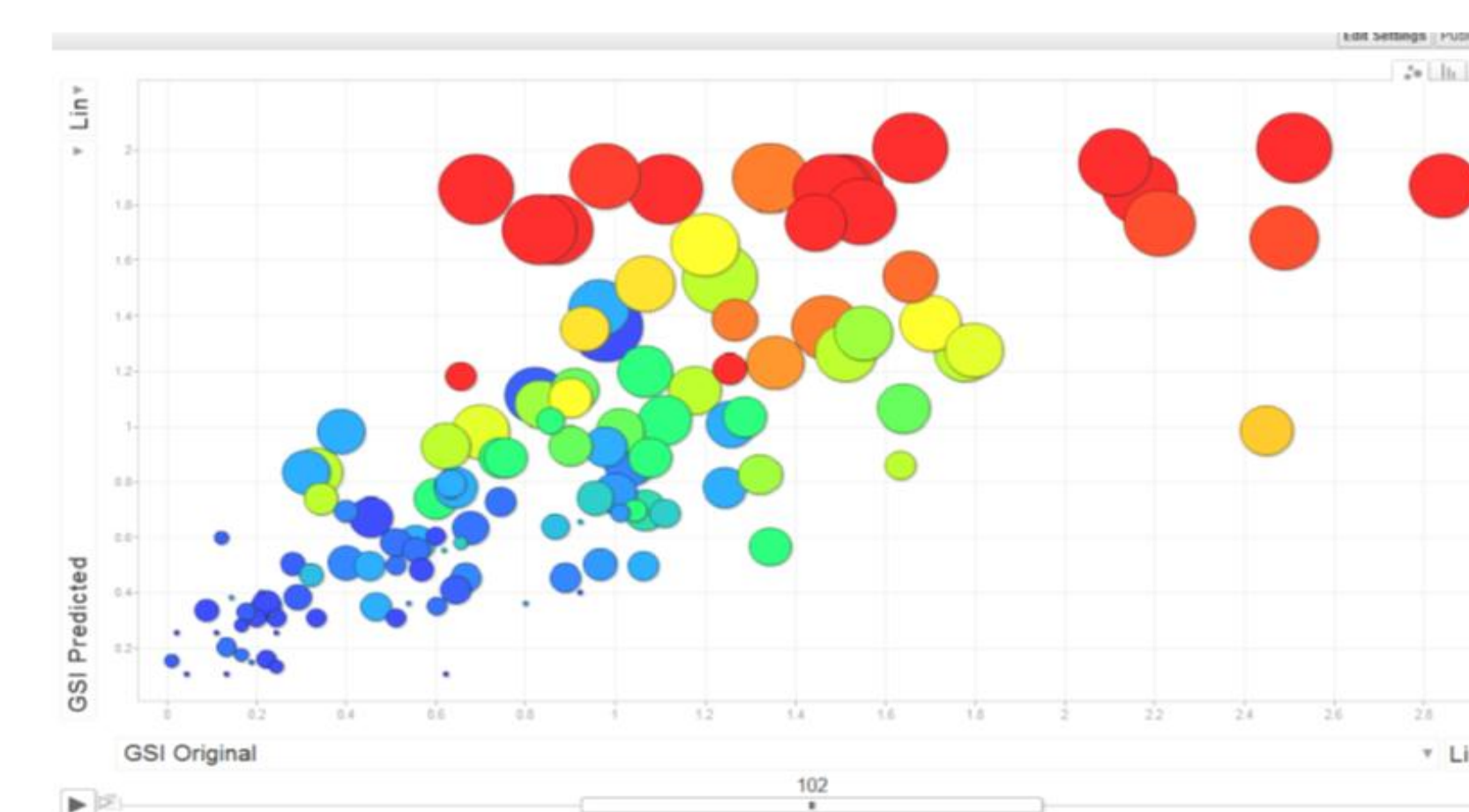
### Anxiety (Blue = Fewer Days)



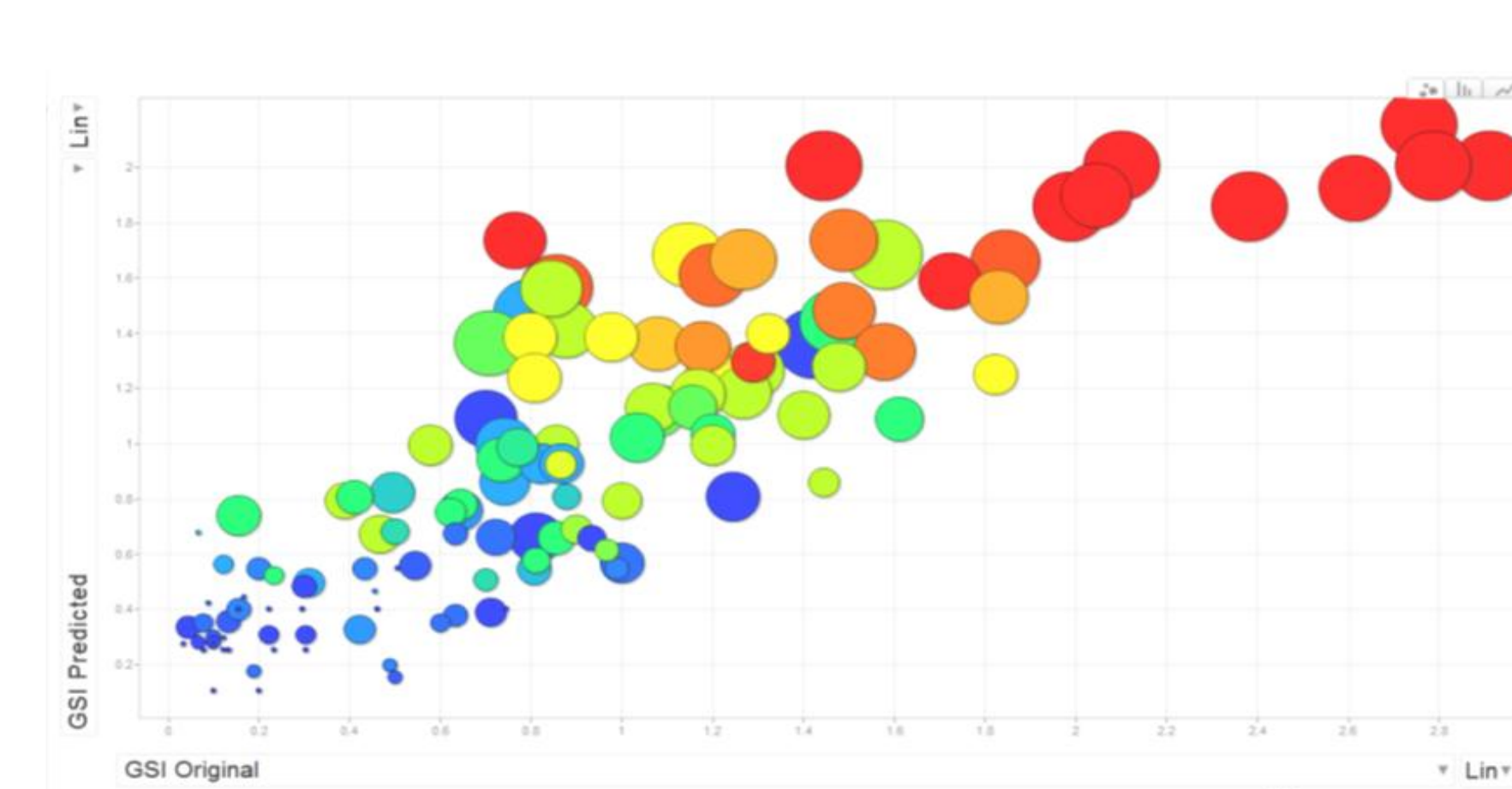
### Depression (Small = Fewer Days)



### Wave 2 (October)



### Wave 3 (January)



## Discussion

Rural people with disabilities are among the most disadvantaged people in America. In addition to living in largely resource poor environments, they often lack opportunities for mental health services that are sensitive to the challenges of living with a disability.

Overall, these results showed rural people with disabilities experience higher rates of mental health symptoms as measured by the SCL-90 than the general population. Depression, anxiety and overall health are good indicators of the overall symptom burden and constitute an efficient and accurate screening measure. Because these results indicate mental health symptoms are related to health status, they indicate the need for:

- Appropriate community mental health services
- Behavioral Medicine services that address the whole person

Next steps in this research include:

- Conducting additional analyses to examine the longitudinal effect of changes in health status on mental health symptoms.
- Examining the effectiveness of providing peer support through Centers for Independent Living for improving mental health.

