A DESCRIPTIVE STUDY OF RESILIENCY AND HEALTH IN NURSING

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Nursing Research Consortium

- Started in 2016

- 9 hospitals and 4 nursing education programs

- Leverage resources – personnel and IT support

- Three major studies
  - Nursing students recognized as Rising Stars by STTI
  - Three national presentations
  - Working on two manuscripts

Resiliency Study

■ Education concerns for the well being of nursing students.

■ Hearing more about concerns from hospitals about the current health care environment.

■ Consortium supported proceeding with this study

– *8 hospitals and 4 education programs participate*

– *Defined resiliency – ability to cope with and adapt to stress, dynamic process that can buffer the effects of stress by adapting to the environment*

■ American Nurses Foundation

– Partial funding through the ANF for this study

Research Questions

Three research questions

- Identify individual characteristics (sociodemographic and work role) and organizational factors (work environment) associated with the degree of resiliency among practicing nurses (RNs) and nursing students.

- Identify self-perceived health status among practicing nurses (RNs) and nursing students.

- Reveal relationships between degree of resiliency and perceived health status among practicing nurses (RNs) and nursing students.

Participants and Response Rate

859 practicing nurse (RNs) agreed to participate and finished the survey. The overall response rate was **20.1%.**
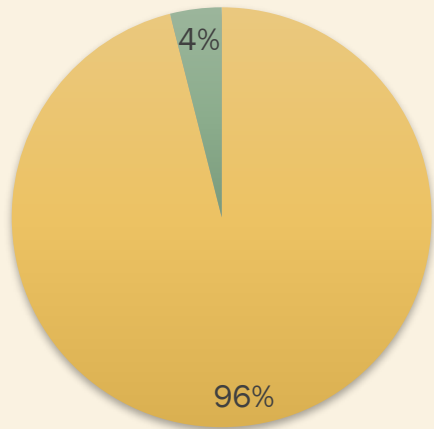
199 nursing students agreed to participate and finished the survey. The overall response rate was **24.8%.**
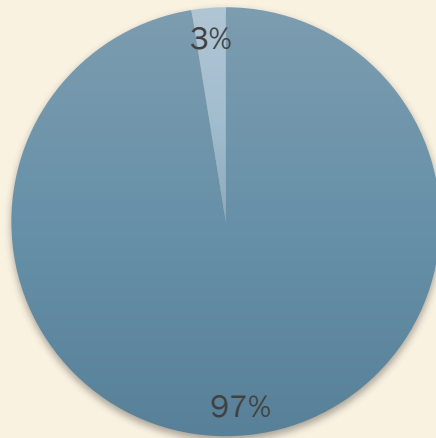
Demographic Characteristics

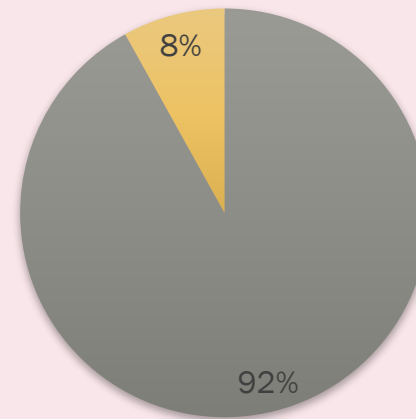## Practicing Nurses:

Mean age: 42 (SD=12.48)

Gender: RNs

4%

96%

- Female
- Male

Race: RNs

3%

97%

- White
- Other

Nursing students:

Mean age: 23 (SD=6.03)

Gender: students

8%

92%

- Female
- Male

Race: students

6%

94%
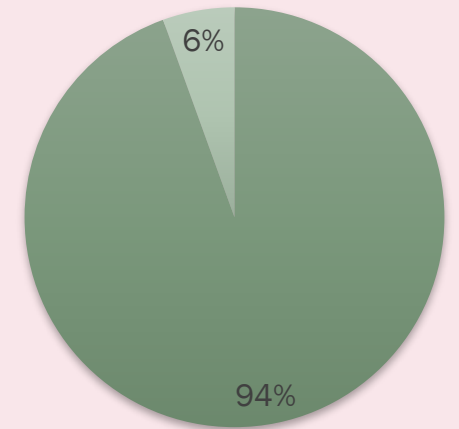
- White
- Other

Education: Practicing Nurses

Highest Nursing Degree:

MSN 10%

Doctorate 1%

RN Diploma 4%

ASN 30%

BSN 55%
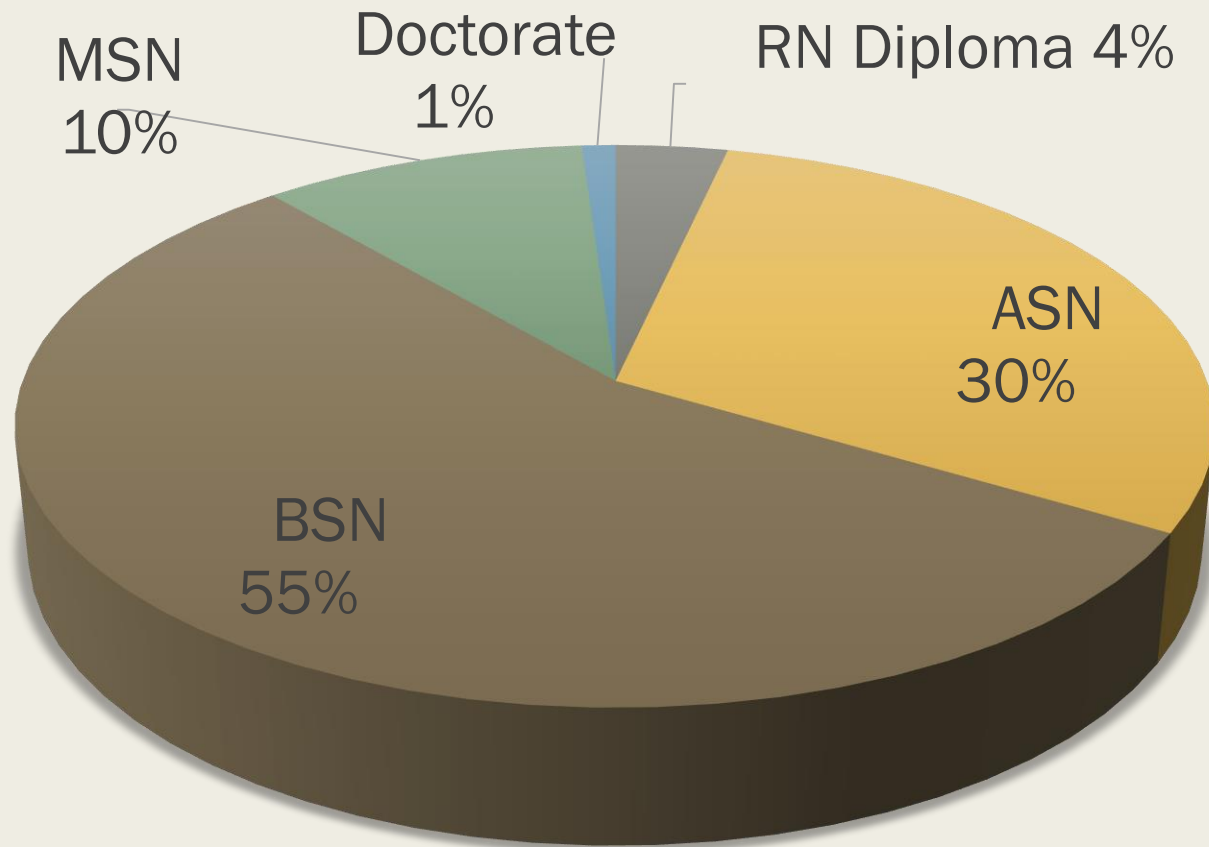
22% RNs currently enrolled in nursing education program:

Program enrolled	
RN-BSN	50%
MSN/MN	47.34%
Post masters certificate/Doctorate	2.66%

Practicing Nurses

Work hours per week	
0 – 24 hours	11.87%
25 - 36 hours	48.66%
37 - 40 hours	32.13%
40+ hours	5.36%
PRN or varied	1.98%
Overtime hours worked per week	
None	55.13%
0.5 – 4 hours	24.11%
4.5 – 8 hours	11.58%
More than 8 hours	7.04%
PRN, salaried or varied	2.15%
Work hours	
Days	77.86%
Evenings	2.80%
Nights	16.90%
Rotates between days, nights or evenings	2.45%
RN experience	
Up to 2 years	8.82%
2-5 years	15.30%
5-10 years	18.81%
10+ years	57.07%

Experience in current unit/department		
Up to 2 years	178	20.79%
2-5 years	232	27.10%
5-10 years	171	19.98%
10+ years	275	32.13%
Most time (>51%) involved in…		
Direct patient/population care	661	76.95%
Administration/management	136	15.83%
Education/professional development	62	7.22%
Area of work		
Acute care	573	67.10%
Ambulatory/primary care	210	24.59%
Long term care	18	2.11%
Education	53	6.21%

Practicing Nurses

| Days miss work in past 3 months	
None	71.33%
1 day or shift	17.95%
2-3 days or shifts	8.97%
More than 3 days or shifts	1.75%
Ever thought of quitting current job	
Never	33.02%
Sometimes	58.34%
Usually or Always	8.64%
How often think workload is too much	
Never	14.47%
Sometimes	67.91%
Usually or Always	17.62%

Education: Nursing Students

NURSING PROGRAM CURRENTLY ENROLLED
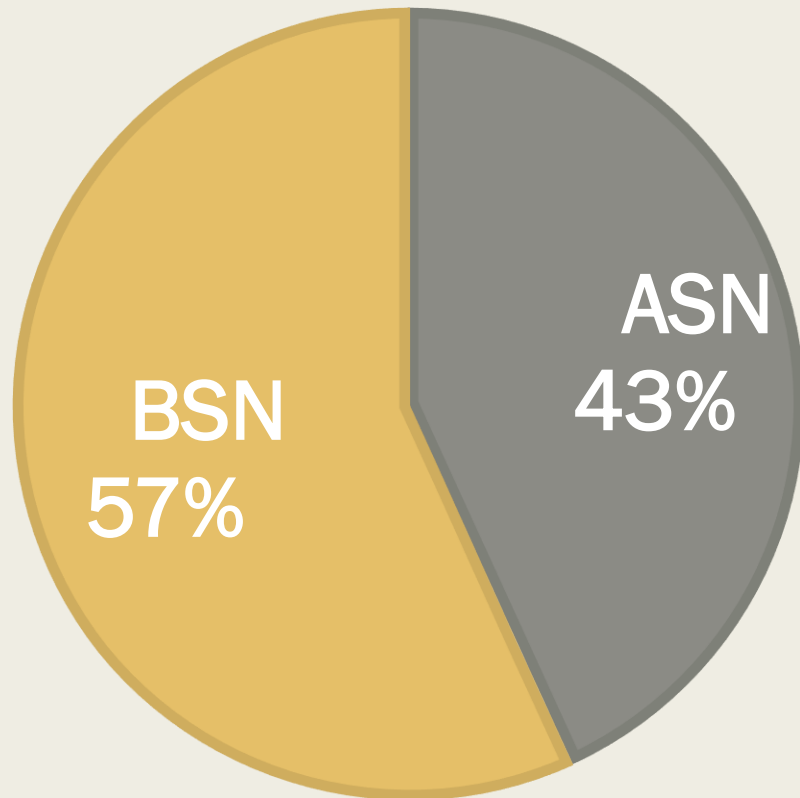
Semesters completed	
One	33.51%
Two	23.20%
Three	18.04%
Four	16.49%
Five	8.76%
Credit hours currently enrolled (Mean=13.64, SD=2.70)	
Less than 12 credit hours	12.31%
12-15 credit hours	62.56%
15+ credit hours	25.13%
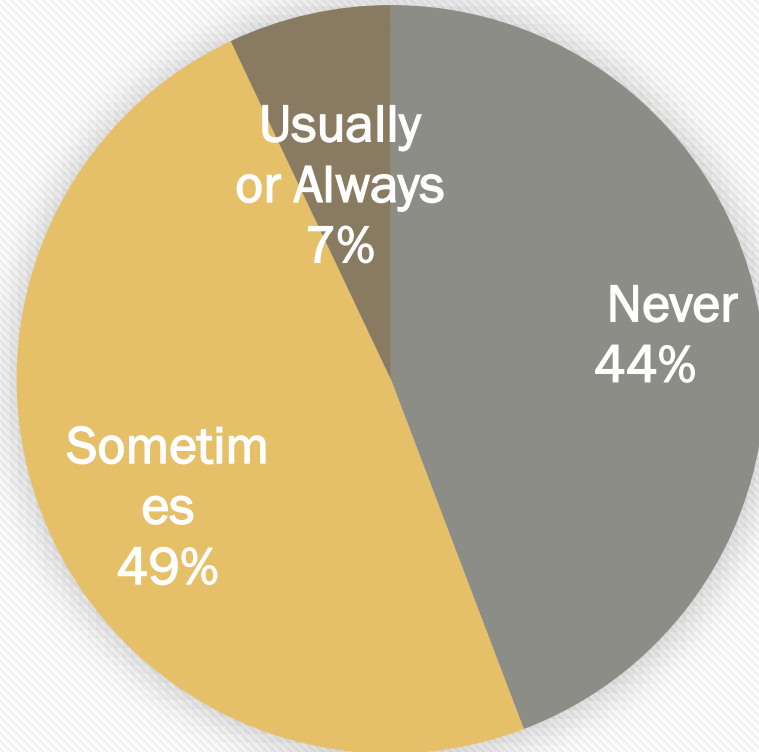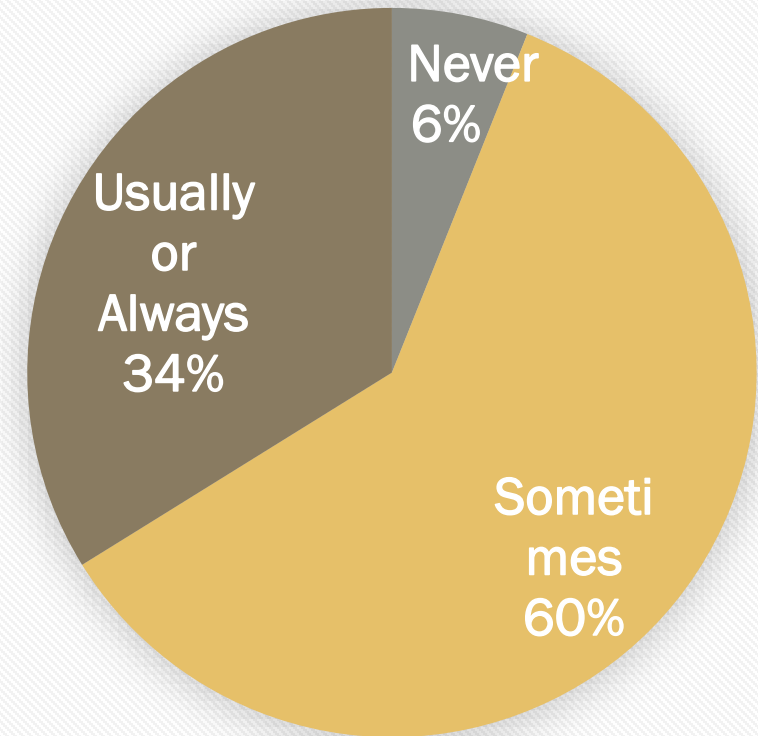
Work: Nursing Students

Paid working hours per week outside of school (Mean=13.88, SD=12.15)	
None	21.24%
1-10 hours	24.35%
11-20 hours	34.20%
20+ hours	20.21%
Usual work hours	
Days	56.89%
Evenings	28.74%
Nights	8.98%
Split shift	5.39%

Facility working in	
Clinic	2.09%
Medical office	1.05%
Hospital	39.79%
Nursing home/LTC	7.33%
Worked outside healthcare	17.80%
Currently not employed	16.23%
Other	15.71%

Outcome Measurement

- **Resilience measurement:**
  - *Connor-Davidson Resilience Scale (CD-RISC-25)*
  - *25 items and each is scored from 0-4*
  - *Sum score range is 0-100,* **with higher scores reflecting greater resilience**
  - *US general population mean score: 80.7*

- Sample Item
  - *Having to cope with stress makes me stronger*
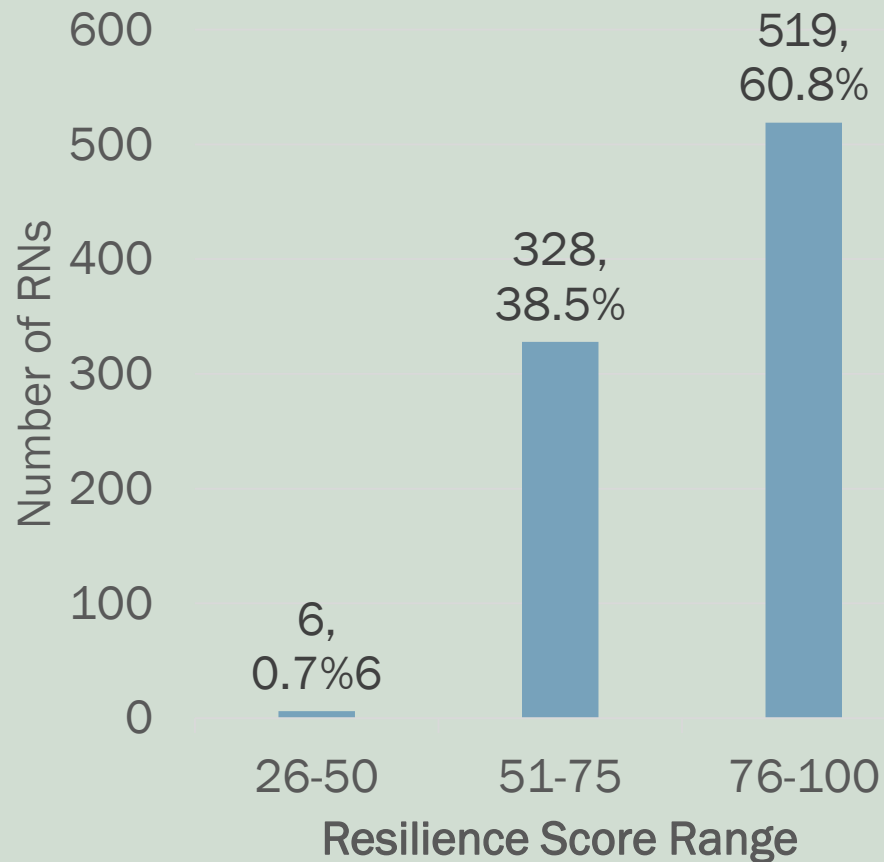 - *0 (not at all true) to 4 (true nearly all of the time)*

Outcome Measurement

■ **Physical and mental health measurement:**

   – *PROMIS Global Health Short Form v1.0*

   – *10 items, sum item scores to measure mental and physical health respectively*

   – *Sum score range is 4-20 for mental and physical health indicator respectively,* **with higher scores reflecting better physical or mental health**

   – *US general population mean score for mental health is 15, and for physical health is also 15.*

■ Sample Item

   – *In general, would you say your quality of life is*

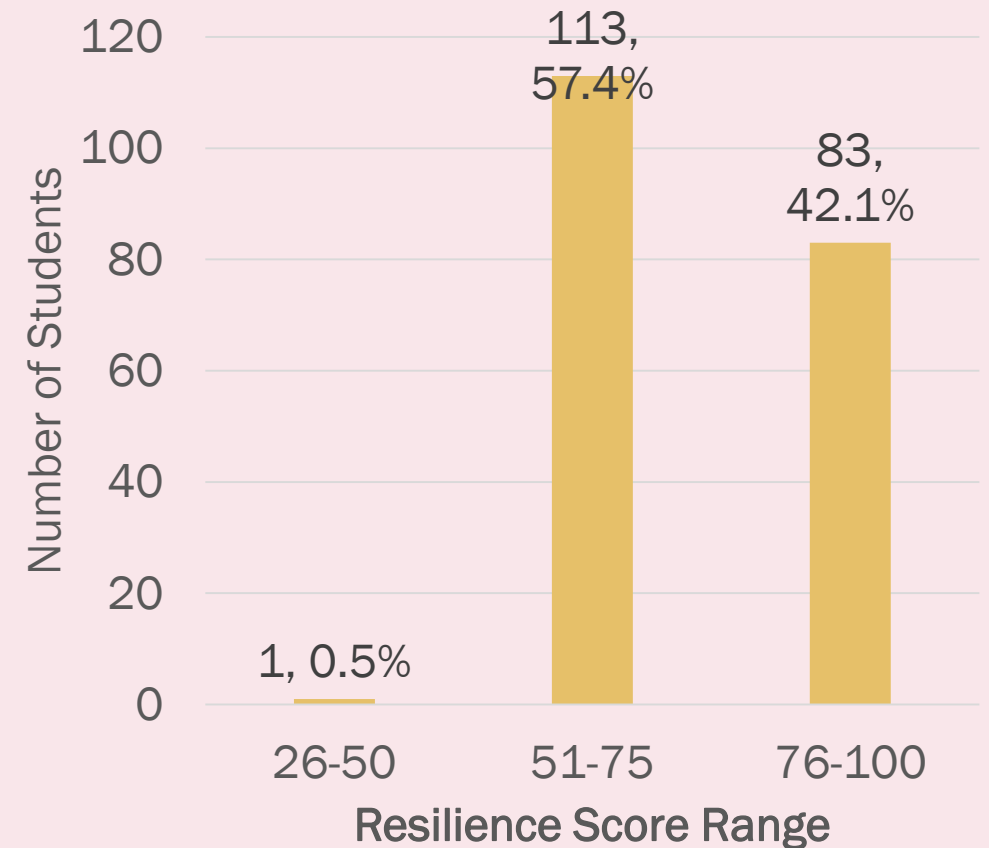   – *5 (very excellent) to 1 (poor)*

Resilience Score

Practicing Nurses:

Mean=78.92, SD=11.53, Median=78, Range:37-100
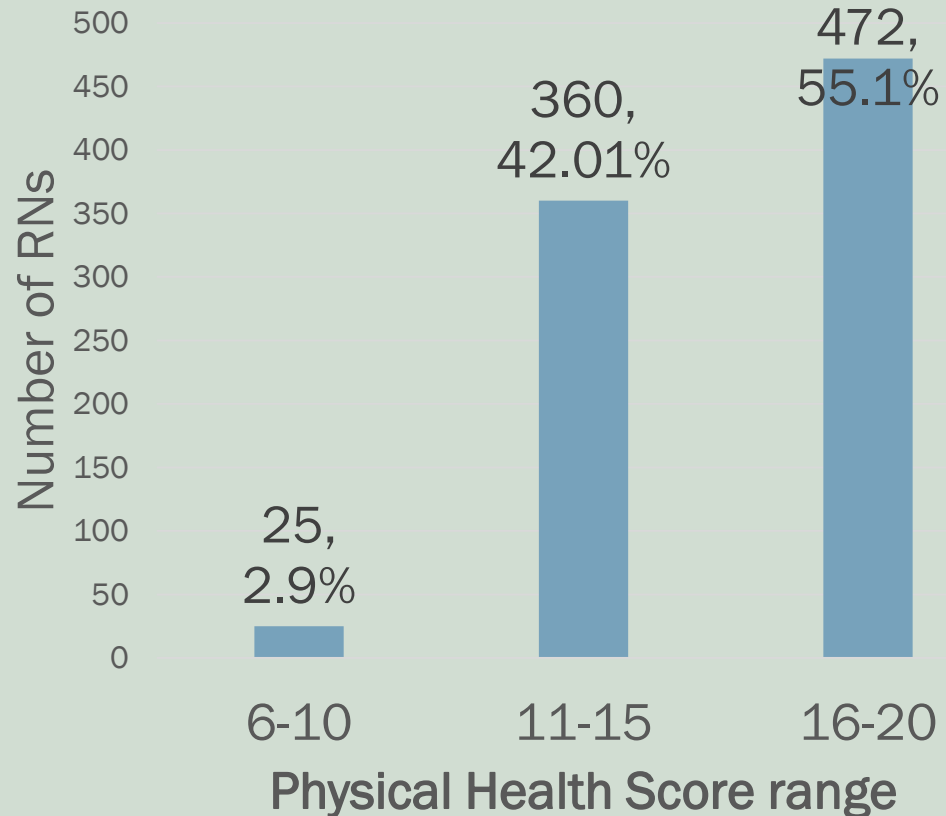
Nursing Students:

Mean=73.83, SD=11.18, Median=73, Range: 45-100

Practicing Nurses chart (Number of RNs vs Resilience Score Range):
- 26-50: 6, 0.7%
- 51-75: 328, 38.5%
- 76-100: 519, 60.8%

Nursing Students chart (Number of Students vs Resilience Score Range):
- 26-50: 1, 0.5%
- 51-75: 113, 57.4%
- 76-100: 83, 42.1%
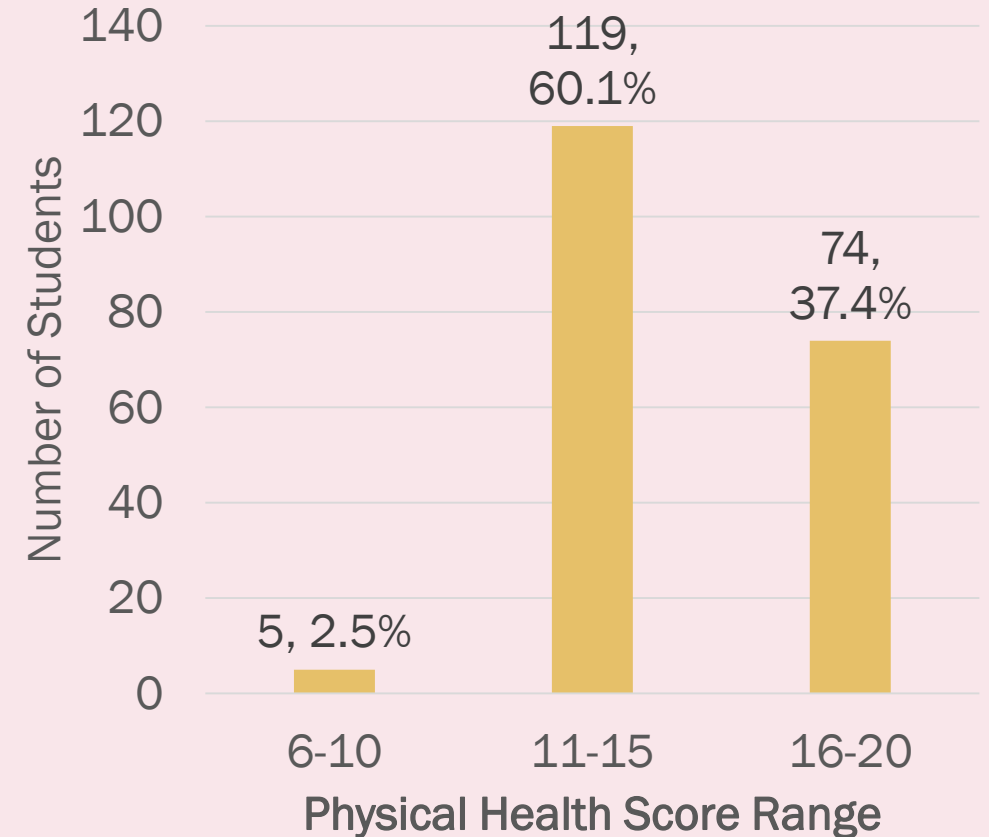
Physical Health

Practicing Nurses:

Mean=15.52, SD=2.05, Median=16, Range:7-19

Nursing Students:
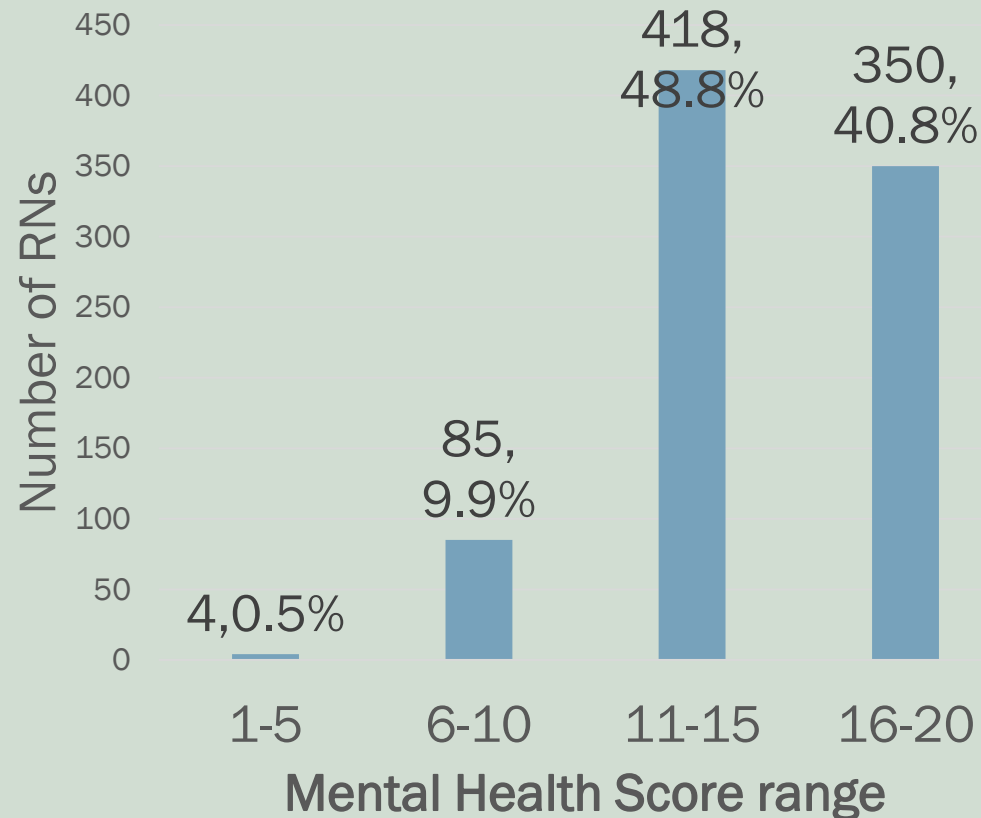
Mean=14.87, SD=1.97, Median=15, Range: 9-19
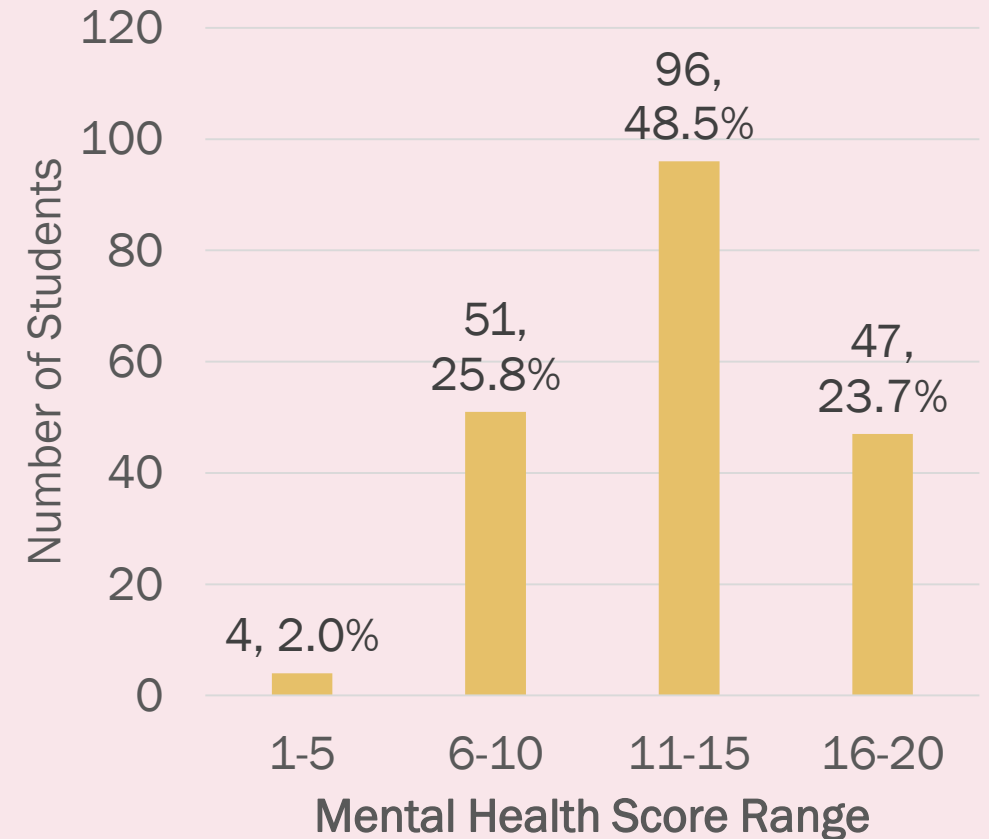
Mental Health

Practicing Nurses:

Mean=14.43, SD=3.07, Median=15, Range:4-20

Nursing Students:

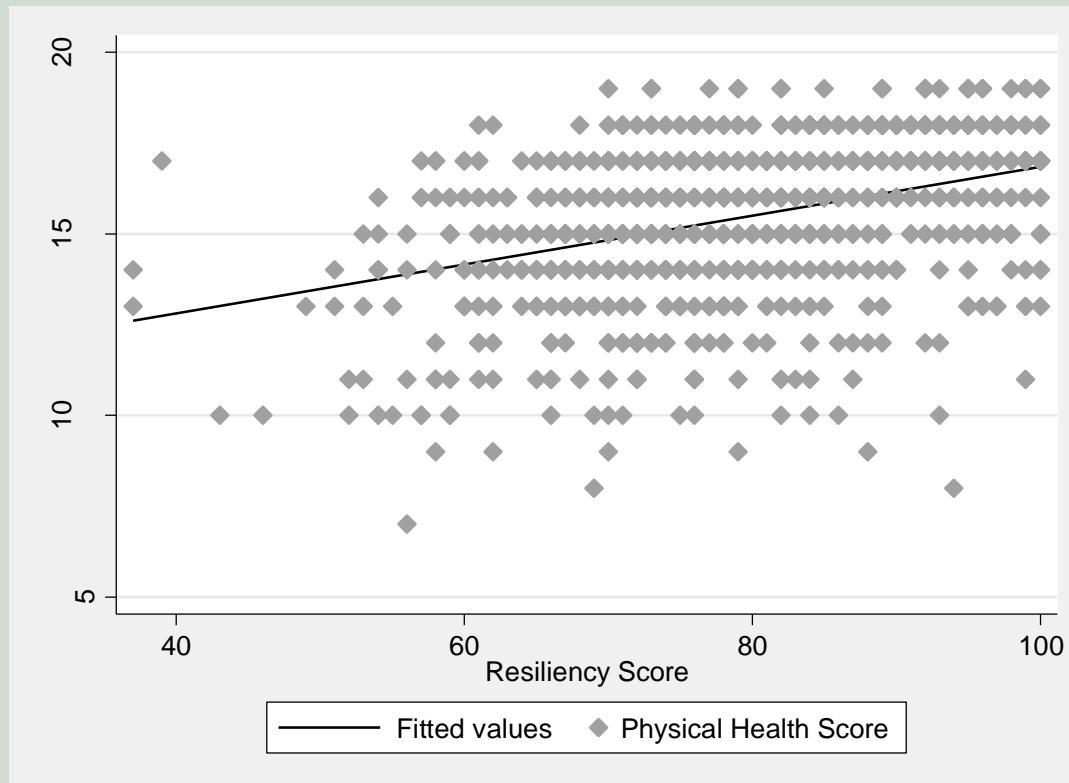Mean=12.58, SD=3.56, Median=12, Range: 4-20

Association between Resilience and Physical Health

Practicing Nurses:

Coefficient=0.3796, p<0.05
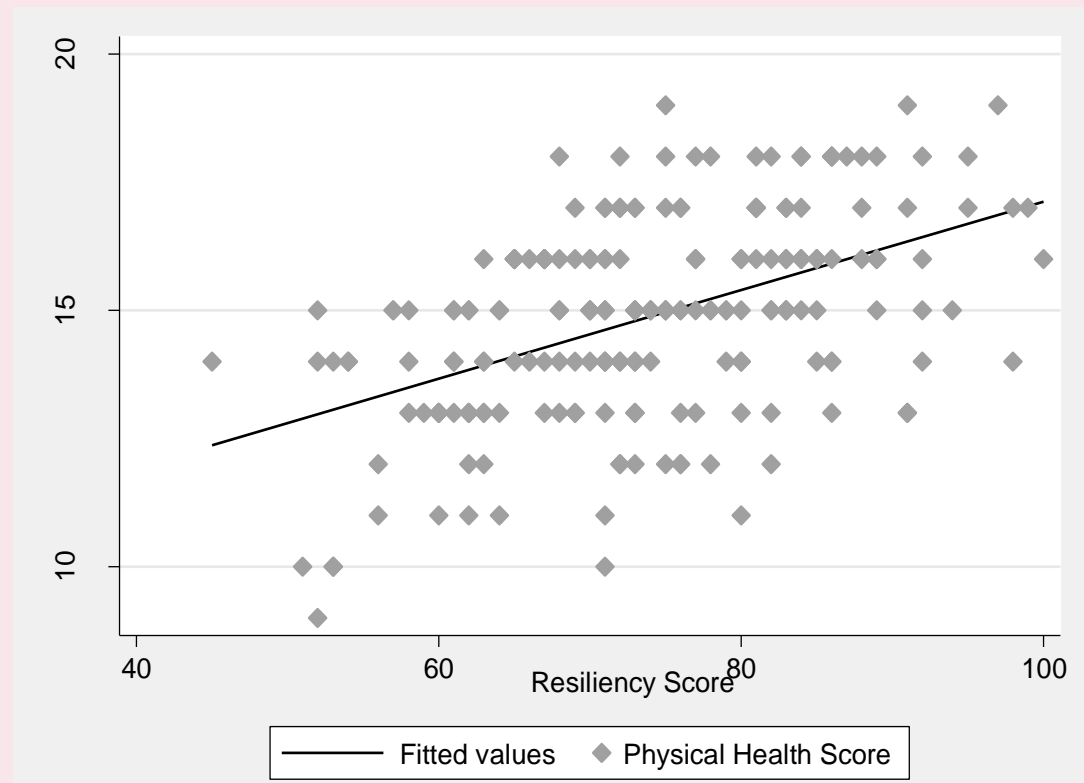Physical health score is significantly positively correlated with resiliency score.

Nursing Students:

Coefficient=0.4820, p<0.05
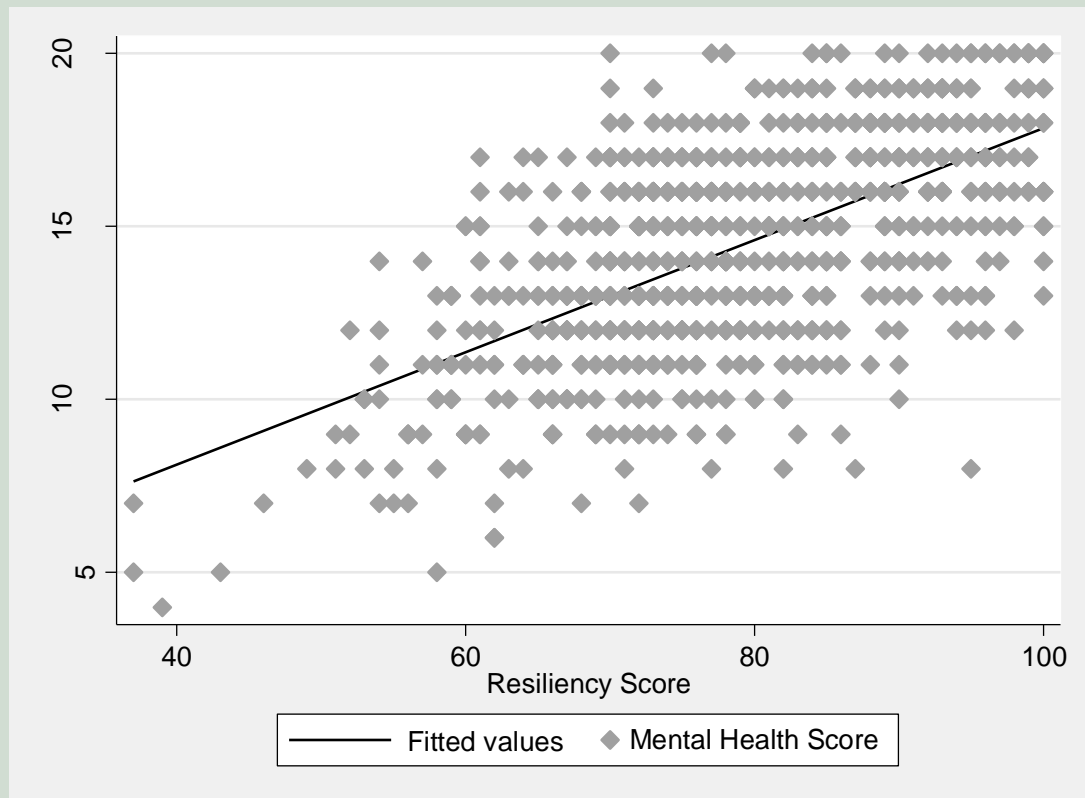Physical health score is significantly positively correlated with resiliency score.
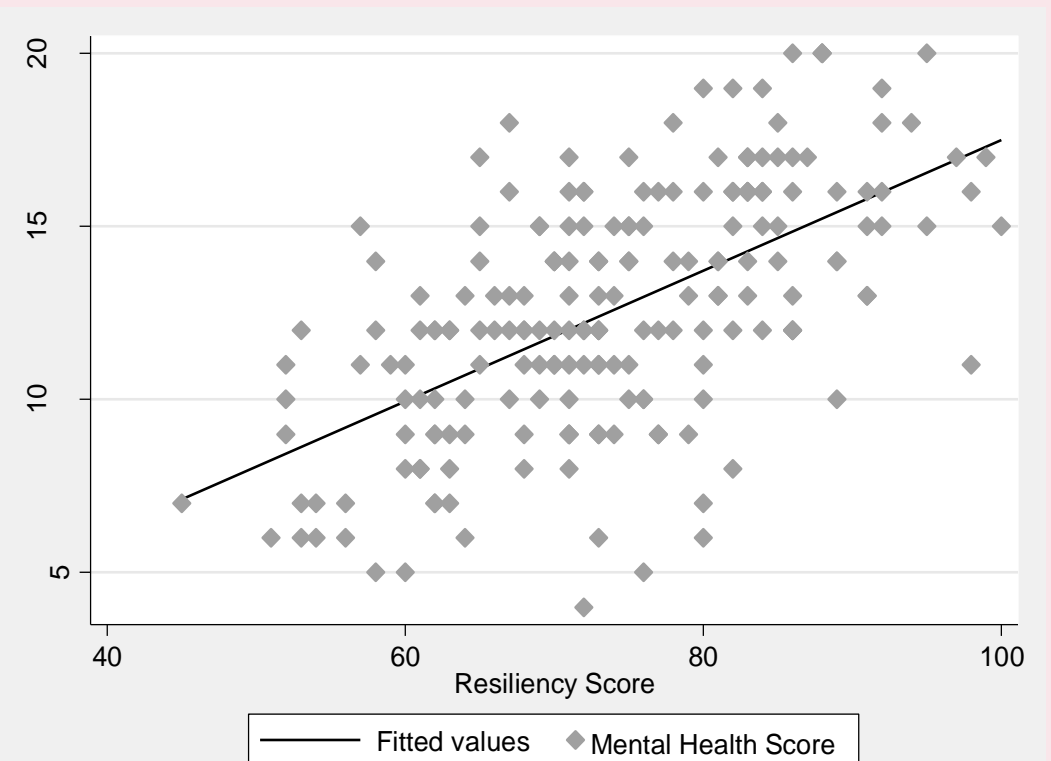
Association between Resilience and Mental Health

Practicing Nurses:

Coefficient=0.6076, p<0.05
Mental health score is significantly positively correlated with resiliency score.

Nursing Students:

Coefficient=0.5930, p<0.05
Mental health score is significantly positively correlated with resiliency score.

Summary of Results

On average, practicing nurse (mean score=78.9) and nursing student (mean score=73.8) participants have lower mean **resiliency score** compared to the general US population (80.7).

On average, practicing nurse (mean score=15.5) and nursing student (mean score=14.9) participants' **physical health** is close to the general population average level (mean score=15).

On average, practicing nurse (mean score=14.4) and nursing student (mean score=12.6) participants' **mental health** is worse than the general population average level (mean score=15).

Higher resilience level is **significantly associated** with better physical and mental health in both practicing nurse and nursing student participants.

Next Steps

- Linear regression model to identify the association between the outcomes variables (resiliency, physical health, and mental health) and independent variables

- Dominance analysis used to determine the relative importance of the variables associated with resiliency, physical health, and mental health

Factors significantly associated with resiliency, physical health and mental health in nurses, and ranking of relative importance of predictor variables

Factors	Resiliency	Physical Health	Mental Health
Age	2 (20.8%)		4 (8.8%)
Highest nursing degree (RN diploma vs. ASN/BSN/MSN or higher)	4 (7.9%)		
Most time involved in... (Administration/management)	6 (2.0%)		
Days miss work in past 3 months	5 (7.6%)	2 (25.2%)	3 (11.4%)
Ever thought of quitting current job	1 (42.2%)	3 (20.5%)	1 (45.3%)
How often think workload is too much	3 (19.5%)	1 (35.3%)	2 (26.7%)
Work time (days/evenings/nights/rotates)		4 (10.7%)	5 (7.9%)
Overtime hours worked per week		5 (7.6%)	

Factors significantly associated with resiliency, physical health and mental health in **nursing students,** and ranking of relative importance of predictor variables

Factors	Resiliency	Physical Health	Mental Health
Nursing program currently enrolled (ASN or BSN)	4 (8.0%)		
Semester completed	3 (14.3%)	2 (30.1%)	3 (18.2%)
Ever thought of giving up on nursing program	1 (51.1%)	3 (28.2%)	2 (30.4%)
How often think course load is too much	2 (26.4%)	1 (41.2%)	1 (46.9%)

Future Research

- Subgroup looking specifically at nursing students results

- Expand the study – replicate with 4 additional health care systems and 4 additional nursing education programs.

Thank you!

- ■ American Nurses Foundation – support of this study

- ■ Indiana Center for Nursing – support of this study

- ■ Dr. Chen Chen – statistician and co-creator of this power point presentation

Questions?

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