



Resilience in Rural Community Dwelling Older Adults

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Introduction and Problem

By 2010 the population 65 years and older in the US is expected to increase 15 % to 40 million.
By 2030 this population is expected to be 71.5 million which will represent 20 % of the US population.

Rural populations have a slightly higher proportion of older adults in their total population than urban areas due to:
**Aging in place
**Out-migration of young adults
**In-migration of elderly to retirement areas

Rural dwellers often face unique challenges related to:
**Access to healthcare due to distance and isolation
**Personal beliefs about health
**Reliance on self and those with whom they are close

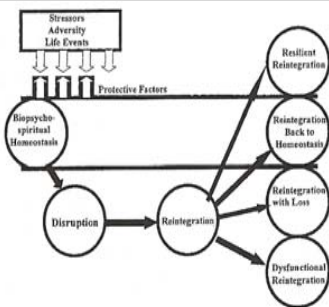
Aging is associated with an increased likelihood of experiencing chronic health problems and reduced functional status and resilience may be a factor that helps older adults adjust to the changes and difficulties associated with aging.

Research Questions

What is the level of resilience of rural community dwelling older adults?

What is the relationship between socio-demographic factors, physical and mental health status, social networks, and resilience?

Theoretical Model



Richardson, 2002

Literature Review

Children and Adolescents

Protective factors (dispositional, family, external support) were identified that help facilitate adaptive outcomes in children at risk. (Garnezy, 1985; Rutter, 1985, 1987; Werner, 1989)

A 30 year study of infants born on the island of Kauai (1/3 identified as "at risk") and 1/3 of those "at risk" developed into competent, confident, and caring adults (Werner, 1989).

Findings from several studies identified a relationship between positive emotions or mental health and resilience (Cummins, Ireland, Resnick, & Blum, 1999; Rew, Taylor-Seehafer, Thomas & Yockey, 2001; Tusaie & Patterson, 2006, Tusaie, Puskar, & Sereika, 2007).

Three studies of at risk teens found a negative or no relationship between connectedness with others and resilience (Hunter & Chandler, 1999; Markstrom, Marshall, & Tryon, 2000; Rew et al., 2001).

Adults

Many studies found a relationship between mental health and resilience (Aroian & Norris, 2000; Cambbell-Sill, Cohan, & Stein, 2006; Heilemann et al., 2002; Heilemann et al., 2005; Humphreys, 2003; Lothe & Heggen, 2003; Miller & Chandler, 2002; Tugade & Fredrickson, 2004).

Some studies found a relationship between physical health and resilience (Christopher, 2000; Heilemann, 2005; Humphreys, 2004).

Elder adults

Wagnild and Young (1993) developed the Resilience Scale from a qualitative study of older adult women.

Positive relationships were found between resilience and indicators of successful aging (health status, life satisfaction, morale, and health promoting behaviors) (Wagnild, 2003).

Hardy, Concato, and Gill (2004) studied resilience in 754 community-dwelling older adults and found independence of IADLs, good to excellent self-rated health, and few depressive symptoms were associated with high levels of resilience.

In a Swedish study of 125 of the oldest old, perceived physical health did not correlate with resilience; however, perceived mental health was found to be correlated with resilience in women. (Nygren et al., 2005).

Montross et al. (2006) studied 205 community dwelling adults over age 60 and found that self-rated successful aging was significantly related to the number of social networks, activities, physical and mental health and resilience scores.

Yoon and Lee (2007) studied 215 rural community-dwelling elders and found relationships between religiousness/ spirituality and social support to psychological well-being (life satisfaction and depression).

Sampling Procedure and Instruments

Sampling Procedure

The sample size of this study was 106.
**A sample size of 84 was needed for a 2-tailed test with an alpha of .05, a moderate effect of $r=0.30$, and a power of 0.80 (Munro, 2001).

Research packets were mailed to 300 registered voters 65 years and older in rural areas of New York State.

77 packets were returned (25.7 % return rate).

Reminder post cards yielded another 15.

60 more packets were mailed to voters and 15 were returned (25% return rate).

Instruments

Resilience Scale (Wagnild & Young, 1993)
SF-12 Health and Wells-Being Scale (Ware, Kosinski, Turner-Bowker, & Gandek, 2002).

Lubben Social Network Scale Revised (LSNS-R) (Lubben, Gioronda, & Lee, 2001)

Results

Sample

Gender: 53.8 % females and 46.2 % males.
Marital status: 63.2% were married and 25.5% were widowed. 7.5% were single and only 3.8 % were divorced.
Employment: 80.2 % were not employed.
Age: The mean age was 74.8 years with a range of 66-91 years.
Income levels: 5.7% less than \$10,000; 29.2% between \$10,000 and 24,999; 21.7% between \$25,000 and 34,999; and 36.8 % had incomes levels above or equal to \$35,000.
Education levels: 94.4 % were high school graduates and 30 % had bachelor's degrees or higher (20.8 % had graduate degrees).

Research question 1: What is the level of resilience of rural community dwelling older adults?

The total mean Resilience Scale score of the sample was 149.4 (SD 18.20) and range of 88-175 and this is considered high.

Research Question 2: What is the relationship between resilience and self-reported physical and mental health status, social networks, and socio-demographic factors?

No statistically significant correlations were found between resilience and age, education, income, marital and employment status. There were statistically significant positive relationships between resilience and:
Total LSNS-R scores ($r=20, p<.05$), and the friend subscale of the LSNS-R ($r=20, p<.05$)
Physical health status ($r=.24, p<.05$)
Mental health status ($r=.58, p<.001$)

In regression analysis, the linear combination of physical and mental health status and social networks were significantly related to resilience and accounted for 38 % of the variance of resilience: $F(4,96)=14.38, p<.01$.

Only the partial correlation of the mental health status was significant and it alone accounted for 31 % of the variance of resilience.

Implications of Findings

**This sample of rural community dwelling older adults had high levels of resilience and other studies of older adults found high resilience levels.

**Mental health and resilience were correlated in this study and mental health was found to be the strongest predictor of resilience which is well supported in the literature.
Addressing the mental health needs of rural elders is an essential component of providing comprehensive healthcare to help rural elders maintain homeostasis or recover from hardship.

**The relationship between physical health status and resilience was weak indicating that while many older adults may experience declining physical health, resilience levels do not always decrease.

**A weak relationship between resilience and social networks was found.
A component of resilience is self-reliance and while some level of social interaction appears to be important, it may not be essential for adaptation and recovery of adversity in resilient individuals

Limitations

Mailed surveys may not have captured the true level of resilience of rural community dwelling adults.

Those with limited literacy levels may have been excluded from the study.

Those with poor visual acuity may have been excluded from the study.

Those with mental health issues may have been excluded.
Directions on the Resilience Scale were incorrect on page 2 of the instrument and this is a threat to internal validity.

Future Research

**A longitudinal study starting in young adulthood and continuing through old age to determine if resilience levels change with developmental stages.

**Studying resilience while one is experiencing a hardship will help understand the process of resilience.

**Studying the relationship between spirituality and resilience in rural older adults is needed.

**Developing and studying the effectiveness of interventions to increase rural older adults level of resilience.

Clinical Application

Primary health care providers (PCP) in rural settings could screen their elderly patients for resilience levels.

Those with low levels of resilience could be referred to a mental health provider for a thorough mental health assessment and possible counseling to increase resilience levels.
PCPs ensure that physical healthcare needs are being met.
When appropriate, PCPs could encourage older adults to increase social networks through involvement in community centers or churches.
Intervening before disruption occurs is ideal.