

Quality of Life as a Mediator of Health

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Abstract. This study explored the hypothesis that quality of life mediated the effects of depression and loneliness on health, something not previously found in the literature. Measures included the GDS-15, UCLA-R Loneliness scale, CASP-19 quality of life scale, and a one-item subjective health rating. Participants were 40 frail older adults receiving Home and Community-Based Services (HCBS). A path analysis showed that the model was a good fit for the data ($c^2(2, N=40) = 0.27, p = .88$; NFI = .997, RFI = .991, RMSEA = .00). These results indicate that the effects of depression and loneliness on health can be accounted for by their influence on quality of life.

1. Introduction

This study examined the social support networks and mental and physical health of frail older adults living in the community. The goal of this study was to determine the effects of depression, loneliness, and quality of life on the health status of older adult Home and Community-Based Services (HCBS) customers. Depression has often been found to be a predictor of mortality, and is significantly related to health status declines (Alpass & Neville, 2003). Loneliness is negatively associated with emotional well-being, is a predictor of cognitive decline, a risk factor for depressive symptoms, and poses substantial mortality risk (Litwin & Shiovitz-Ezra, 2011). Although being diagnosed with a disease may have several confounding factors (such as age, genetics, sex), frailty (psychological, physical, and social) has been found to mediate the relationship between disease and adverse outcomes (Price, Choi, & Vinokur, 2002).

Netuveli and colleagues (2006), using the Control, Autonomy, Self-Realization, and Pleasure needs satisfaction model (CASP-19), found that limitations in physical activities and having no support with these limitations reduced quality of life in the older adult population. They also found that depression had the greatest impact on reducing quality of life (Netuveli et al., 2006). However, depression and loneliness are both short-term statuses compared with the long-term overall quality of life.

In summary, the goals of the present study were to explore a model of the effects of well-being on health status of frail older adults. It was hypothesized that, while depression and loneliness would show significant correlations with health status, these effects would be mediated by quality of life.

2. Experiment, Results, Discussion, and Significance

Methods

This study used a cross-sectional design. Teams of two graduate students interviewed 40 randomly selected older adults in the HCBS population in Southcentral Kansas from August 1 through December 14, 2012.

The GDS-15 was used to measure depression (Almeida & Almeida, 1999). Possible scores ranged from 0 – 15, with higher scores meaning higher rates of depression. Loneliness was measured with the UCLA-R loneliness scale (Russell, 1996). Scores for the individual items were summed, and possible scores ranged from 20 – 80. A single-item subjective health measure was used to assess health (Wen, Hawkey, & Cacioppo, 2006). This item was scored so that higher scores reflected better health ratings. The instrument that was used to measure quality of life was the CASP-19 model (Hyde, Wiggins, Higgs, & Blane, 2003). Overall scores were determined by summing the scores, with possible scores ranging from 0 – 57.

Results

Descriptive statistics were run for the physical and mental health variables (depression, quality of life, loneliness, and health status). Pearson's product-moment correlations were run in order to determine the relationship between variables (see Table 1 for a summary of results). Path analysis was run in order to determine mediation (see Figure 1). Chi square test showed that the model was not statistically different from a "perfect fit" data set ($c^2(2, N = 40) = 0.27, p =$

.88). Fit indices showed a good fit of the model (NFI= .997, RFI = .991, RMSEA = .00, CFI = 1.00).

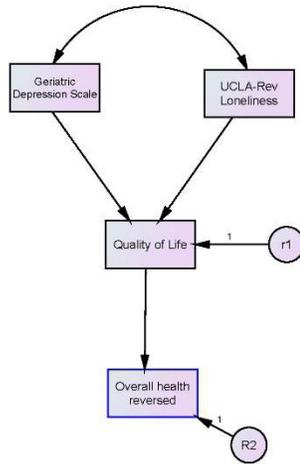


Figure. 1. Path analysis.

Discussion

The results of this study showed that the more depressed or lonely a participant was, the lower they rated their health; but the higher the quality of life, the better they rated their health. Also, data indicated that the best predictor for health status was quality of life. These findings are consistent with prior research that found better health outcomes are related to better quality of life. The path analysis showed that loneliness and depression had an indirect influence on health through quality of life (See Figure 1). Therefore, the effects of loneliness and depression were partially mediated through quality of life.

Limitations and Future Research

There were several specific criteria for participation in the research, and these criteria attributed to a decrease in a potential sample from over 800 to less than 100. This limits the generalizability of the findings to other populations. Future research should include larger sample sizes in order to better understand the interrelatedness of the outcome variables. Finally, future research should use more measures of health status (such as ADL/IADL deficiency or number of medical conditions) in order to perform a more meaningful model analysis through SEM.

3. Conclusions

This research has shown that there are important risk factors and protective factors for the well-being of frail, older adults. Depression and loneliness are potential risk factors for health, while quality of life is a potential protective factor. The effects of these risk factors are mediated through quality of life. This study was only able to run a path analysis and not a structural equation modeling (SEM) analysis, as the health measure was a single item. Future research should focus on increasing our understanding of the interactions among these variables. Understanding the relationships between these variables will be key to planning interventions for this population.

Table 1. Correlations with Means, SD, Range, and Cronbach's Alpha.

Measure	1	2	3	4
1. Subjective Health	--			
2. Quality of Life	.59	.78 ^a		
3. Depression	-.42	-.72	--	
4. Loneliness	-.37	-.71	.76	.90 ^a
<i>M</i>	2.63	38.70	4.38	38.70
<i>SD</i>	1.00	7.49	3.15	10.62
Range	1.0-5.0	17.0-52.0	0.0-11.0	20.0-63.0

N = 40.

^aCronbach's Alpha

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