

Health related Quality of Life and the Colorectal Cancer Screening Behaviors -the MIMIC analysis

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Introduction

- Health-related quality of life (HRQOL) is a multi-dimensional concept that includes domains related to physical, mental and social functioning, referring to a person or groups' perception.
- HRQOL is often used as an important outcome in the randomized trials, especially in cancer prevention programs and treatment studies, even among the aged population with poor health status due to disease incidence or severity

Introduction

- Although the majority of clinical trials and community intervention programs use HRQOL as an intervention outcome, there are limits to the measure due to uncertainties in the interpretation of the data.
- Although regular CRC screenings are conceptually associated with better HRQOL scores, some studies have interpreted the mediational effects between them such as false-positive results from the screening tests or decreased physical functioning after cancer treatments, as an indication of poor HRQOL scores.

Introduction

- SES factors may play a significant role in their relationship and unique association between HRQOL and CRC screening behaviors

Purposes

- examines if there is a direct association between HRQOL and COL latent variables and racial group differences in these latent variables.
- assesses the relationship between race and these two latent factors

Hypotheses

1. Latent CRC screening behaviors would not be associated with the latent HRQOL.
2. African Americans would have a positive association with the latent HRQOL after controlling for SES variables.

Methods

Data: the National Health Interview Survey (NHIS) 2010.

Analysis: Confirmatory factor analysis with multiple indicators, multiple causes model (MIMIC) by Mplus

Estimator: a mean and variance-adjusted weighted least square method (WLSMV)

Model fit: RMSEA, CFI, TLI.

Measures

- HRQOL -3 items. These were: “In general, how would you rate your physical health?” “In general, how would you rate your mental health, including your mood and your ability to think?” and “In general, how would you rate your satisfaction with your social activities and relationships. (5 pts)
- CRC screening behaviors -3 items, “Have you ever had a colonoscopy?” “Have you ever had a sigmoidoscopy?” and “Have you ever had a blood stool test, using a HOME test kit?” (Yes_No)
- Race- White (1) or Black (0).

Covariates

- Gender
- Age
- Education level
- Marital status
- Health insurance coverage
- Availability of the usual source of care

Participants

N=26,704

Ever Colonoscopy 27%; Sigmoidoscopy 6%; Blood stool test 16%.

28% African American

80% Female

Mean age 57.73

65% Hispanic

62% less than High school graduate

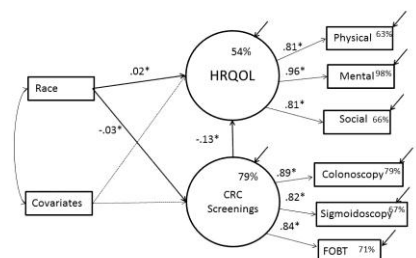
85% Married or committed relationship

41% Health insurance coverage

42% having usual source of care

Results

- the latent CRC screening factor was associated with the latent HRQOL negatively.
- African American would have a positive association with the latent HRQOL/ African Americans reported a better HRQOL factor score, and were less likely to engage in the CRC screening behaviors



Discussion

- The findings that the U.S community residents who regularly perform the CRC screenings give poorer HRQOL scores are not well investigated
- Several studies have found that psychological distress and response shift had a stronger influence than clinical preventive screening behaviors

Discussion

- findings suggest that between-race differences are not due to demographic variables and might be due to differences in attitudes toward cancer screening behaviors as well as cultural bias in psychological status
- strict adherence to screening guidelines can result into heightened stress and psychological burden associated with poor HRQOL scores

Limitations

- Self-reported cancer screening behaviors
- Social desirability bias
- This study uses the global HRQOL questions rather than the HRQOL questions specific to cancer screening behaviors
- Psychological variables were not used to assess the HRQOL scores

Conclusion

- This finding indicated that HRQOL may not be an appropriate indicator to assess the impact of the CRC programs in the population based intervention studies.
- Further research is needed to understand how variances in HRQOL can be related to those of CRC screening behaviors, especially through negative psychological conditions, and how to associate minority population with social contexts and barriers to increase the CRC screening behaviors and HRQOL scores over time.

Contact

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