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Physical Activity and Satisfaction With Life in Older Adults

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Background

- Older adults are the fastest growing segment of the population (CDC)
 - More susceptible to chronic conditions, disability and comorbidities
- Physical activity has been consistently associated with enhanced QOL (McAuley et al., 2006; Netz et al., 2005; Rejeski & Mihalko, 2001)
 - Nature of the relationship is not clear



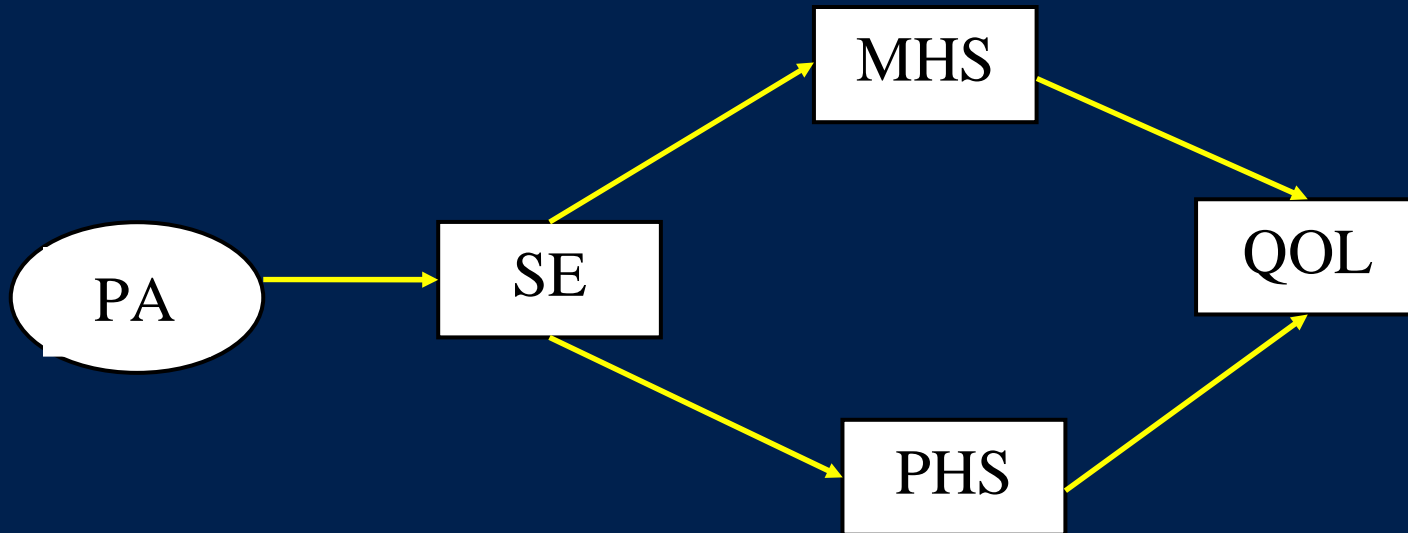
Background

- Conceptualization of QOL in physical activity literature:
 - **Health-related QOL** (Stewart & King, 1991)
 - *QOL is reflection of physical, mental, and social health status*
 - **QOL as a global construct** (Diener, 1984; Rejeski & Mihalko, 2001)
 - *QOL is a conscious cognitive judgment of an individual's life as a whole*
 - *Allows for the development of theory and understanding of variability or changes in QOL (Rejeski & Mihalko, 2001)*



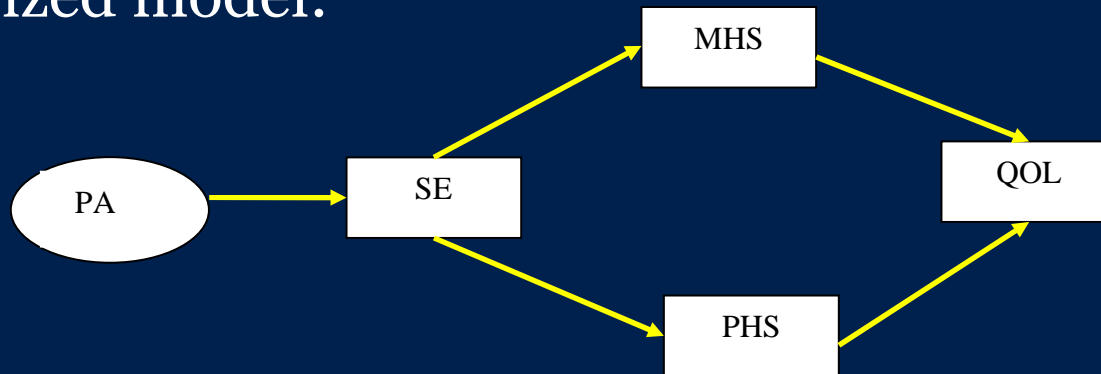
Background

- McAuley et al.'s (2006) social cognitive model supports this perspective



Purpose

- To determine whether the relationship between physical activity and QOL operates through self-efficacy and physical and mental health status pathways, as proposed by McAuley et al. (2006), in a sample of community dwelling older adults
- Hypothesized model:



PA= Physical Activity; SE= Self-efficacy; MHS= Mental Health Status; PHS Physical Health Status; QOL= Quality of life



Procedures

- Participants recruited via fliers and electronic newsletters to participate in mail-based study
- Individuals contacted = 349
- Individuals agreeing to participate = 343
- Final sample = 321
- Upon receipt of completed packet, participants were entered to win 1 of 20 \$50.00 cash prizes



Measures

- Demographics
 - Brief questionnaire assessing sex, age, income, and race/ethnicity
- Physical Activity:
 - Godin Leisure Time Exercise Questionnaire (GLTEQ; Godin & Shepard 1985)
 - *Measures frequency of participation in exercise*
 - Physical Activity Scale for the Elderly (PASE; Washburn et al., 1993)
 - *Measures frequency of participation in leisure, household, and occupational physical activity*
- Self-efficacy
 - Exercise Self-Efficacy Scale (McAuley, 1993)
 - *Measures belief in ability to continue regularly exercising over incremental periods of time*



Measures

- Physical Health Status
 - Disability limitations subscale of the Abbreviated Late Life Function and Disability Instrument (LL-FDI; McAuley et al., 2005)
 - *Reflects physical health status in context of carrying out household and social activities*
- Mental Health Status
 - Physical self-worth subscale of the Physical Self-Perception Profile (Fox & Corbin, 1989)
 - *Reflects mental health status as self-esteem*
- QOL
 - Satisfaction with Life Scale (Diener et al., 1985)



Participant Characteristics

- M age = 63.8 (S.D. = 9.6)
- 80.1% female
- 88.7% white
- 68.1% earn \geq \$40,000 per year
- 58.8% had earned *at least* a college education

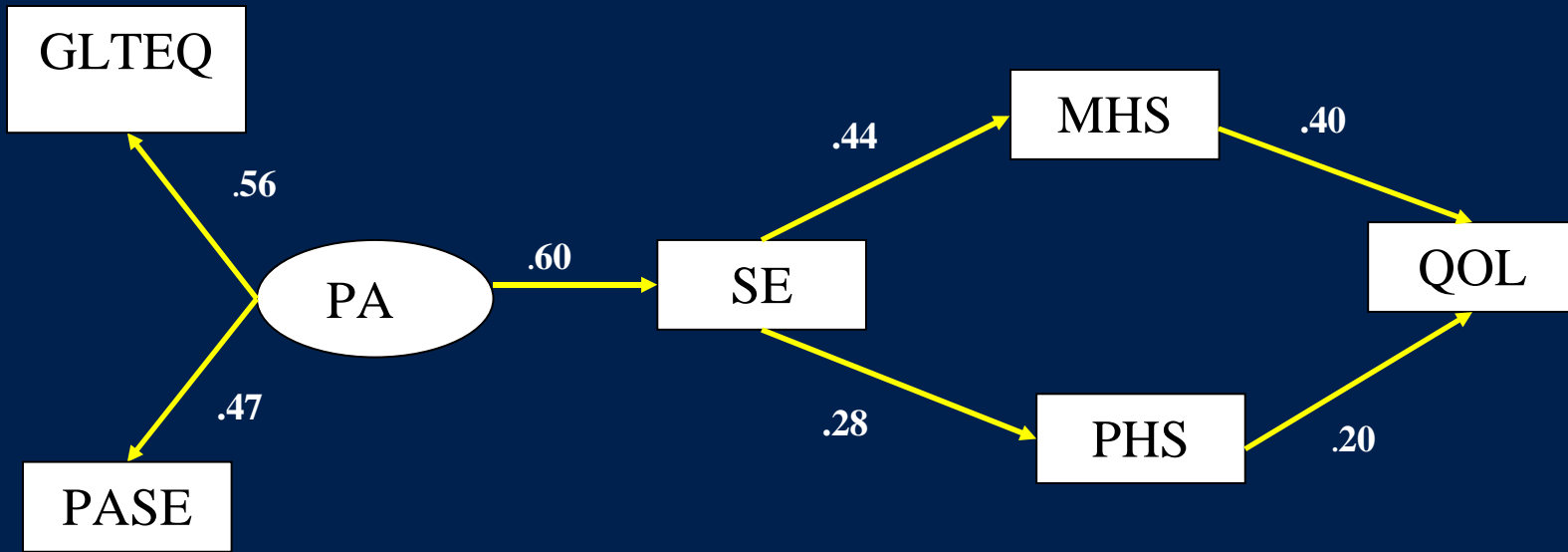


Data Analysis

- Covariance modeling with the full-information maximum likelihood (FIML) estimator in Mplus 5.0
- Missing data ranged from 0.3% (self-efficacy) to 6.2% (PASE)
- Model fit evaluated using the chi-square statistic, standardized root mean square residual (SRMR) and the Comparative Fit Index (CFI)
 - Good Fit: $CFI \geq 0.95$; $SRMR < .08$ (Hu & Bentler, 1999)
- Model also tested when controlling for demographic factors (age, sex, race, education, and income)



Results

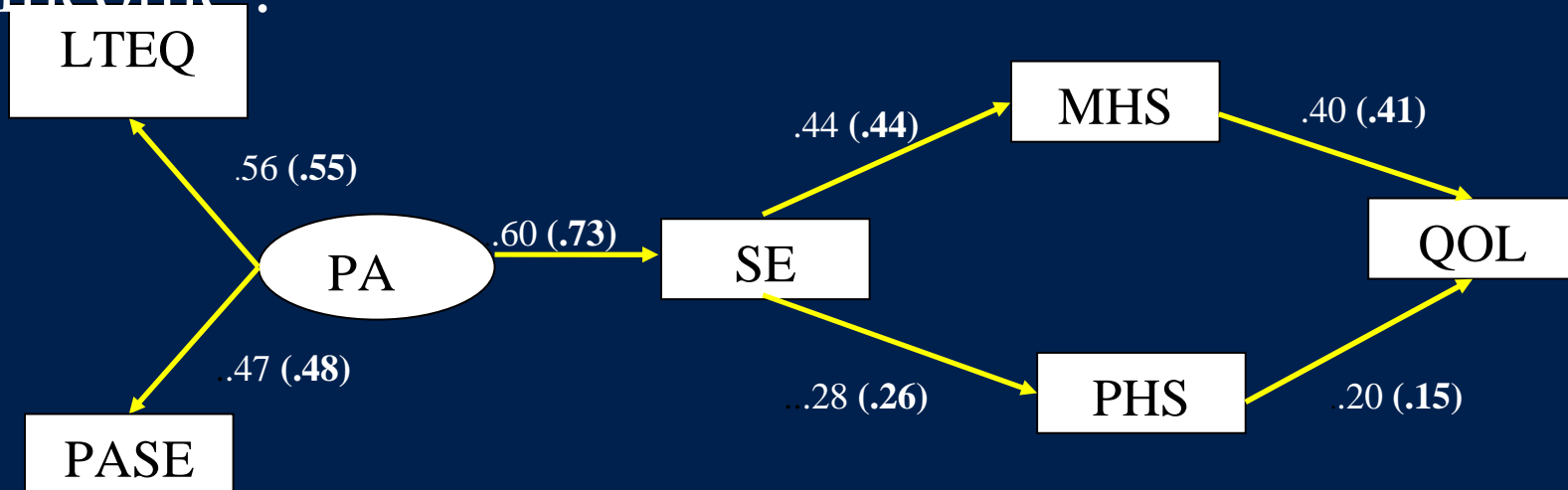


$\chi^2 = 15.59; p = .05; CFI = .97; SRMR = .04$



Results

After controlling for age, race, sex, education, and income:



$$\chi^2(13) = 38.16; p = .05; CFI = .93; SRMR = .04$$



Results

- Age was significantly ($p < .05$) associated with:
 - Physical activity ($\beta = -.34$)
 - Self-efficacy ($\beta = .30$)
 - Physical self-worth ($\beta = .22$)
 - Satisfaction with life ($\beta = .12$)
- Females reported fewer disability limitations ($\beta = -.12$)
- White participants had a better sense of physical self-worth than other races ($\beta = -.21$)
- Higher levels of education associated with higher levels of satisfaction with life ($\beta = .13$)
- Higher income was associated with fewer disability limitations ($\beta = .20$)



Conclusions

- The proposed model was a good fit to the data
 - All hypothesized associations were significant
 - Supports position that relationship between physical activity and QOL can be understood as incorporating:
 - *More proximal, modifiable and temporally sensitive factors*
 - *More stable global constructs*



Conclusions

- The nature of the relationships did not change when controlling for demographic variables
- Self-efficacy appears to play an important role as both an outcome of physical activity and an antecedent to more distal QOL indicators
- Provides further support for similar models in older adults and MS patients



Study Strengths and Limitations

- **Strengths:**

- Adoption of well established theoretical framework
- Relatively large sample
- Application of contemporary statistical methods to examine hypothesized associations

- **Limitations:**

- Cross-sectional data
- Use of manifest or measured constructs rather than latent variables in analyses
- Relatively homogenous sample



Future Directions

- Conduct prospective and randomized controlled studies to examine whether model holds as a result of changes in constructs over time
- Further determination of factors that may play an important role in representing latent elements of physical and mental health status



Thank you!

