

Measuring Satisfaction with Community Inclusion Of People with Intellectual & Developmental Disabilities Who Receive Long-Term Services and Supports

Henan Li, PhD, Nilufer Isvan, PhD, and Alexandra Bonardi, OTR, MHA, FAAIDD, Human Services Research Institute, Cambridge, MA

RESEARCH OBJECTIVE

The National Core Indicators® In-Person Survey (NCI IPS) is an annual multi-state survey of adults with intellectual and developmental disabilities (IDD) receiving long-term services and supports (LTSS). Previous studies have suggested that adults with IDD face various barriers to social inclusion (Abbott & McConkey, 2006). New questions in the NCI IPS 2018-19 survey cycle provided information about the respondents' levels of satisfaction with community group participation and community activities.

The main objectives of the study were to:

1. Use these data to develop a scale measure of satisfaction with the level of community inclusion among adults with IDD who receive LTSS,
2. Test the psychometric properties of the measure; and
3. Investigate the differences in average measure scores among subgroups.

STUDY DESIGN

Based on the results of the principal components analysis (PCA), five survey items are included in the *Satisfaction with Community Inclusion Scale*. Confirmatory factor analysis was conducted to verify the scale's factor structure. Reliability at the individual level was tested using Cronbach's Alpha. Analysis of variance (ANOVA) and inter-unit reliability (IUR) were used to assess the measure's ability to distinguish among states' mean scores. The items went through cognitive testing with 10 participants from the target population. We investigated differences in mean scores among subgroups of respondents with varying sociodemographic characteristics, disability severity, level of behavioral challenges, health status, residential setting, and legal guardianship status, using two-tailed two-sample t-tests. State-level multivariate regression analysis was conducted to investigate the relationships between the measure and another system performance measure-Transportation Availability Scale, controlling for potential confounding factors such as state population, urbanicity, and ranking on LTSS spending.

STUDY POPULATION

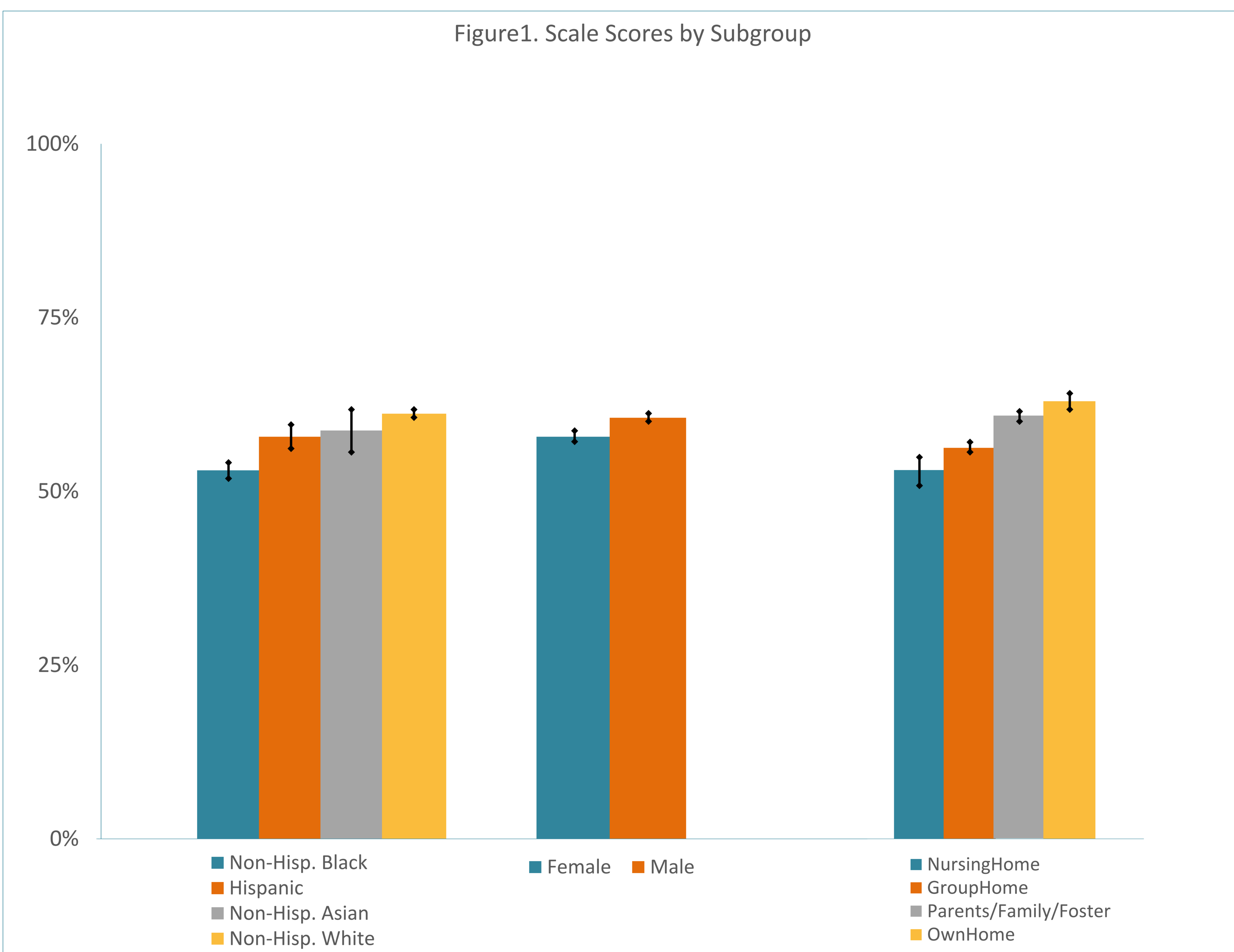
The data used for reliability and validity testing were collected during 2018 and 2019 from about 22,000 individuals with IDD receiving LTSS from their state's responsible agency.

- A total of 37 states were represented in the sample.
- Respondents' average age was 43.
- Fifty-seven percent were female and 43% were male. Seven percent were Hispanic/Latinx.
- Among the non-Hispanic/Latinx respondents, 73% were White only, 15% were Black only, and 2% were Asian only, with all other races and multiple races constituting 4% of the sample.
- Seventeen percent of respondents lived in their own home, 44% lived in their family or a foster home, 32% lived in a group home, and 6% lived in a nursing home.

PRINCIPLE FINDINGS

PCA results indicated that the five items constituted a single factor that explained 46% of the variance with component loadings **between 0.583 and 0.763**. Cronbach's Alpha was **0.704** and corrected item-total correlations ranged between **0.376 and 0.551**. The estimated structural equations model fit the data reasonably well (TLI=0.924; CFI=0.942; RMSEA=0.026). ANOVA results indicated that between-state variability is significantly higher than within-state variability (F=34.2; df=36 & 20,792; p<0.001) and the IUR was 0.971. Cognitive test results revealed **the questions were well understood and consistently interpreted by respondents**. These results indicate **acceptable to good reliability and validity**.

Figure 1. Scale Scores by Subgroup



Preliminary bivariate analysis (Fig. 1) found significant sociodemographic differences in scale scores. Notably:

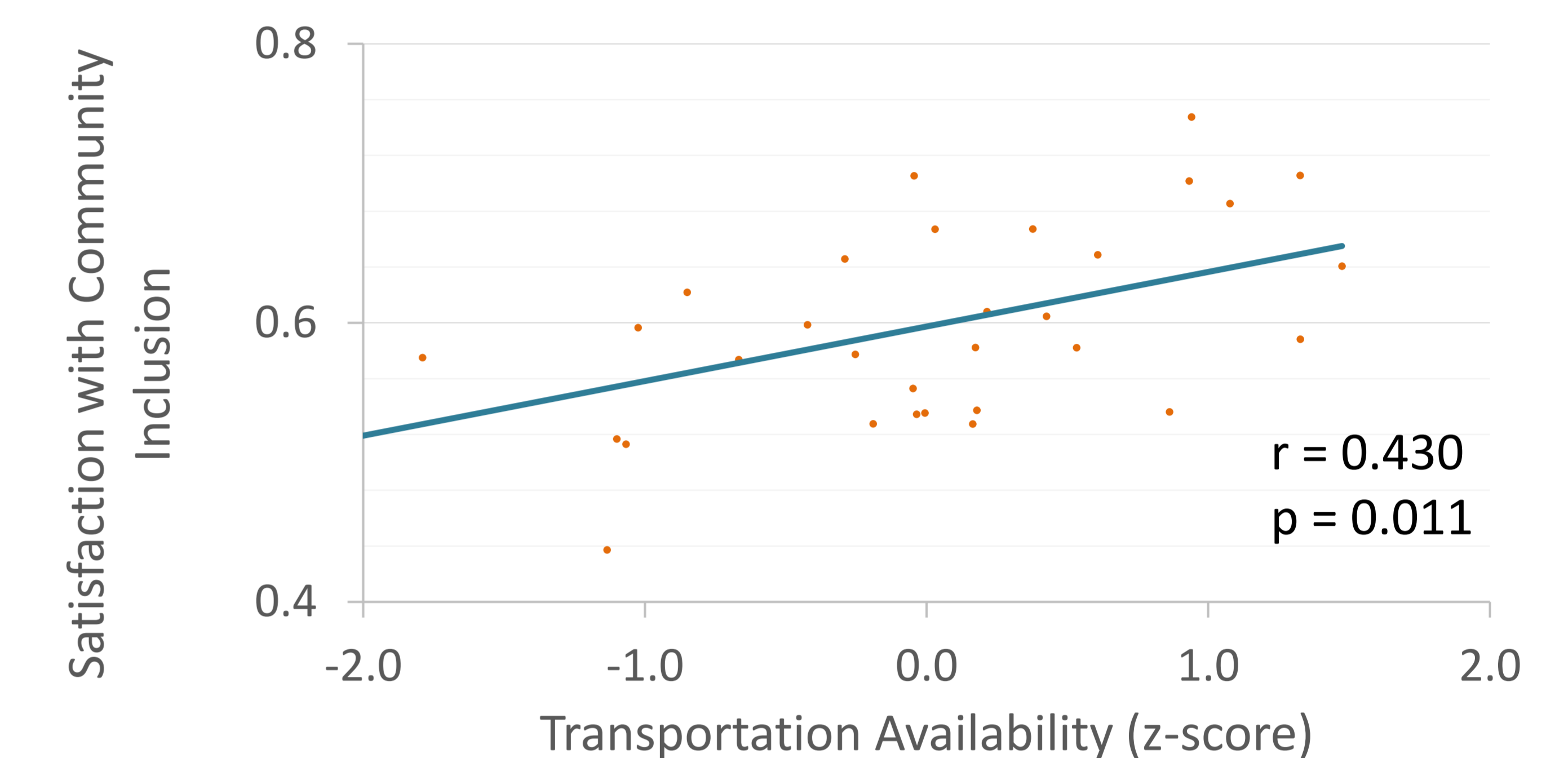
- Non-Hispanic/Latinx White people had the highest mean score while non-Hispanic/Latinx Black people had the lowest (Fig. 1, left)
- Men scored significantly higher than women (Fig. 1, middle)
- People living in their own homes scored the highest while those in institutional settings scored the lowest (Fig. 1, right)

REFERENCES

Abbott, S., & McConkey, R. (2006). The barriers to social inclusion as perceived by people with intellectual disabilities, 10(3), 275-287.
National Core Indicators. (2019). *Adult Consumer Survey (2018-19)* [Data set]. Human Services Research Institute & The National Association of State Directors of Developmental Disabilities Services (NASDDDS). <https://www.nationalcoreindicators.org/survey-reports/2020/>

Figure 2.

State-Level Association Between Transportation Availability and Satisfaction with Community Inclusion, Correcting for Urbanicity, Population Size, and LTSS Spending



Our hypothesis that states' mean scores on *Satisfaction with Community Inclusion* are positively associated with the *Transportation Availability Scale* was supported by the data (Fig. 2), after controlling for states' population, urbanicity, and ranking on LTSS spending.

IMPLICATIONS FOR POLICY AND PRACTICE

Social isolation is an important determinant of behavioral and physical health. By quantifying the extent to which service systems address this factor within a person-centered context, the measure can inform policy decisions to improve LTSS systems and to enhance consumer choice. It also provides a means of identifying disparities in social isolation, facilitating efforts to reduce health inequities.

CONCLUSION

Study results indicate that the Satisfaction with Community Inclusion Scale is a valid and reliable measure of whether community inclusion is at the level desired by the adult with IDD, based on testing within a population that is highly vulnerable to social isolation. Unlike other measures of inclusion, it incorporates consumer preferences, thus providing a means to assess person-centered service planning and delivery.

ACKNOWLEDGEMENTS

Funding sources: Human Services Research Institute, National Association of State Directors of Developmental Disabilities Services, preliminary question development funded by US Dept of Health and Human Services Administration for Community Living

CONTACT INFORMATION

Henan Li, PhD, hli@hsri.org
Nilufer Isvan, PhD, nisvan@hsri.org
Alexandra Bonardi, OTR, MHA, FAAIDD, abonardi@hsri.org
Human Services Research Institute
2336 Massachusetts Avenue,
Cambridge, MA 02140