



University of Michigan researchers developed the Transportation Security Index, the first validated measure of the experience of being unable to move from place to place in a safe or timely manner. The original index is 16-items. A 6-item abbreviated score has been developed and validated. To learn more about the index and potential uses, visit <https://myumi.ch/6NgN9> or contact the research team at [TransportationSecurityIndex@umich.edu](mailto:TransportationSecurityIndex@umich.edu).

**Optional introductory question (designed to prime respondents to consider the full range of transportation options):**

How often do you use each of the following to get from place to place? If the type of transportation is not available to you, please select “Not available to me.”

Statements in rows

1. Walking
2. Biking
3. Riding a motorcycle or moped
4. Your own personal vehicle (e.g., car, truck, SUV)
5. Borrowing the personal vehicle of a friend, family member, neighbor, coworker, or acquaintance
6. Getting a ride from a friend, family member, neighbor, coworker, or acquaintance (including carpooling)
7. Taking a taxi service or rideshare (e.g., Uber, Lyft)
8. Using a rental car or car sharing service (e.g., zipcar, Car2go)
9. Taking the bus
10. Taking the train or subway
11. Using paratransit (that is, specialized, door-to-door transport service for people with disabilities)

Statements in columns:

1. Daily
2. A few times a week
3. A few times a month
4. A few times a year
5. Never
6. Not available to me

## 6-item Validated Transportation Insecurity Index Items:

1. To get to the places they need to go, people might walk, bike, take a bus, train or taxi, drive a car, or get a ride. In the past 30 days, how often did you have to reschedule an appointment because of a problem with transportation? [Often/Sometimes/Never]
2. In the past 30 days, how often did you skip going somewhere because of a problem with transportation? [Often/Sometimes/Never]
3. In the past 30 days, how often were you **not** able to leave the house when you wanted to because of a problem with transportation? [Often/Sometimes/Never]
4. In the past 30 days, how often did you feel bad because you did not have the transportation you needed? [Often/Sometimes/Never]
5. In the past 30 days, how often did you worry about inconveniencing your friends, family, or neighbors because you needed help with transportation? [Often/Sometimes/Never]
6. In the past 30 days, how often did problems with transportation affect your relationships with others? [Often/Sometimes/Never]

### How to score the TSI-6:

To score the TSI-6, look at responses to the main questionnaire, assign each “never” response a score of 0, each “sometimes” a score of 1, and each “often” a score of “2.”

For those interested in using the TSI-6 as a continuous variable, sum the scores to arrive at the candidate’s continuous transportation insecurity score.

For those interested in using the TSI6 as a categorical measure, to assign the respondent to a transportation insecurity category, use the following scheme:

- Sum score 0-1: No insecurity/Secure
- Sum score 2-5: Marginal/Low insecurity
- Sum score 6-12: Moderate/High insecurity

### For more information on how the TSI-6 was developed see:

<https://www.surveypractice.org/article/90320-using-a-split-ballot-design-to-validate-an-abbreviated-categorical-measurement-scale-an-illustration-using-the-transportation-security-index>

**Are you implementing the TSI in your own work?** Please let us know so we can keep track of how it is being used and learn more about what people are finding. Email us at [TransportationSecurityIndex@umich.edu](mailto:TransportationSecurityIndex@umich.edu)

Copyright (c) 2018 The Regents of the University of Michigan is made available under the [CC-BY-NC-ND](https://creativecommons.org/licenses/by-nc-nd/4.0/) license.