

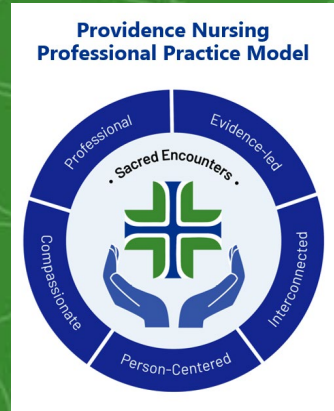


Providence System Nurse Research and Clinical  
Scholarship Symposium 2024

***Clinical Inquiry: The Catalyst to Nursing Excellence***

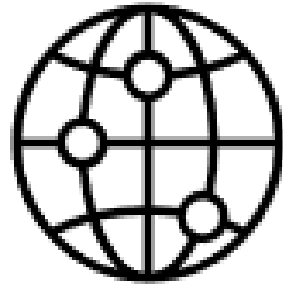
# Health Professional Concern for Environment and Behaviors to Protect Climate Health

Teresa Rangel, PhD, MSN, RN, CNL, Sarah Johnson, Mary Jo Kelly, Gale  
Springer PMHCNS-BC, ARNP



# Background and Problem Statement

- **Medical waste contributes to air pollution, which impacts climate change**
- **Climate change has been attributed to 7 million premature deaths annually**
- **US Healthcare Professionals (HCP) could help reverse the impact of medical waste on air pollution and global health**
- **Little is known about HCP concern for climate and health and self-reported behaviors at home or work to protect the environment**



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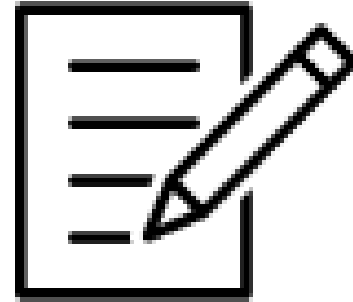
# Clinical Question and Project Aims

- Among HCP participants, what are average climate and health concern, behaviors at home, and behaviors at work scores measured by a valid and reliable tool?
- What is the relationship between HCP age, concern and home/work behaviors as measured by a valid and reliable tool?
- Our study aims:
  - **Describe HCP climate and health concern and behavior scores on a valid and reliable tool**
  - **Test for relationships between the three different scores among a sample of HCP**



# Methods

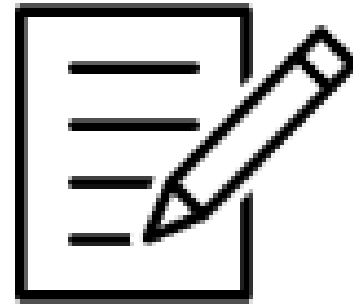
- Cross-sectional, electronic survey-based study
- Study activities
  - ***First, a survey was distributed to all eligible staff***
    - *Flyers, word of mouth, email invitations*
  - ***Second, data were cleaned and analyzed***
  - ***Finally, outcomes were calculated to answer study questions***





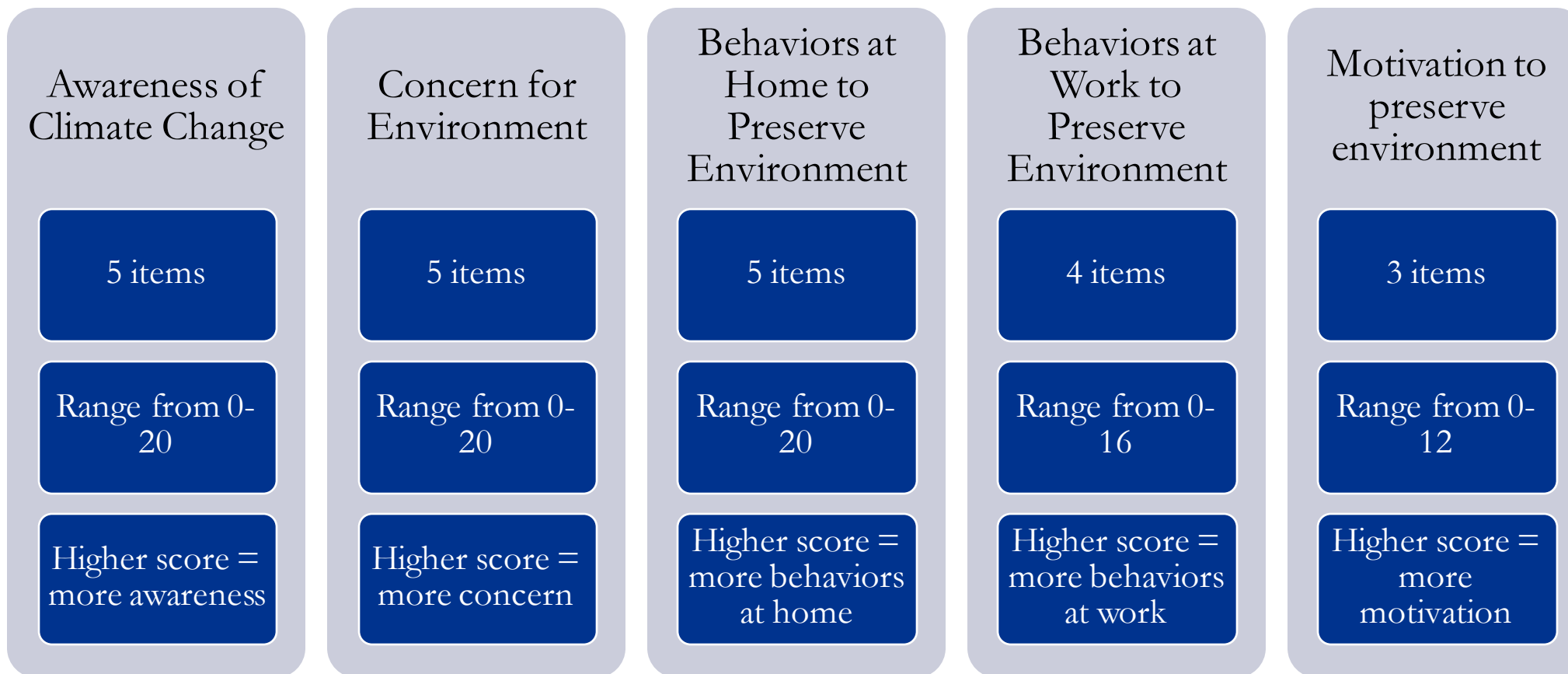
# Methods

- Survey invite active from September 2023 to November 2023
  
- Variables analyzed:
  - Age (in years)
  
  - Subscale scores of valid and reliable Climate and Health Tool
    1. Behaviors at home
    2. Behaviors at work
    3. Concern for the environment



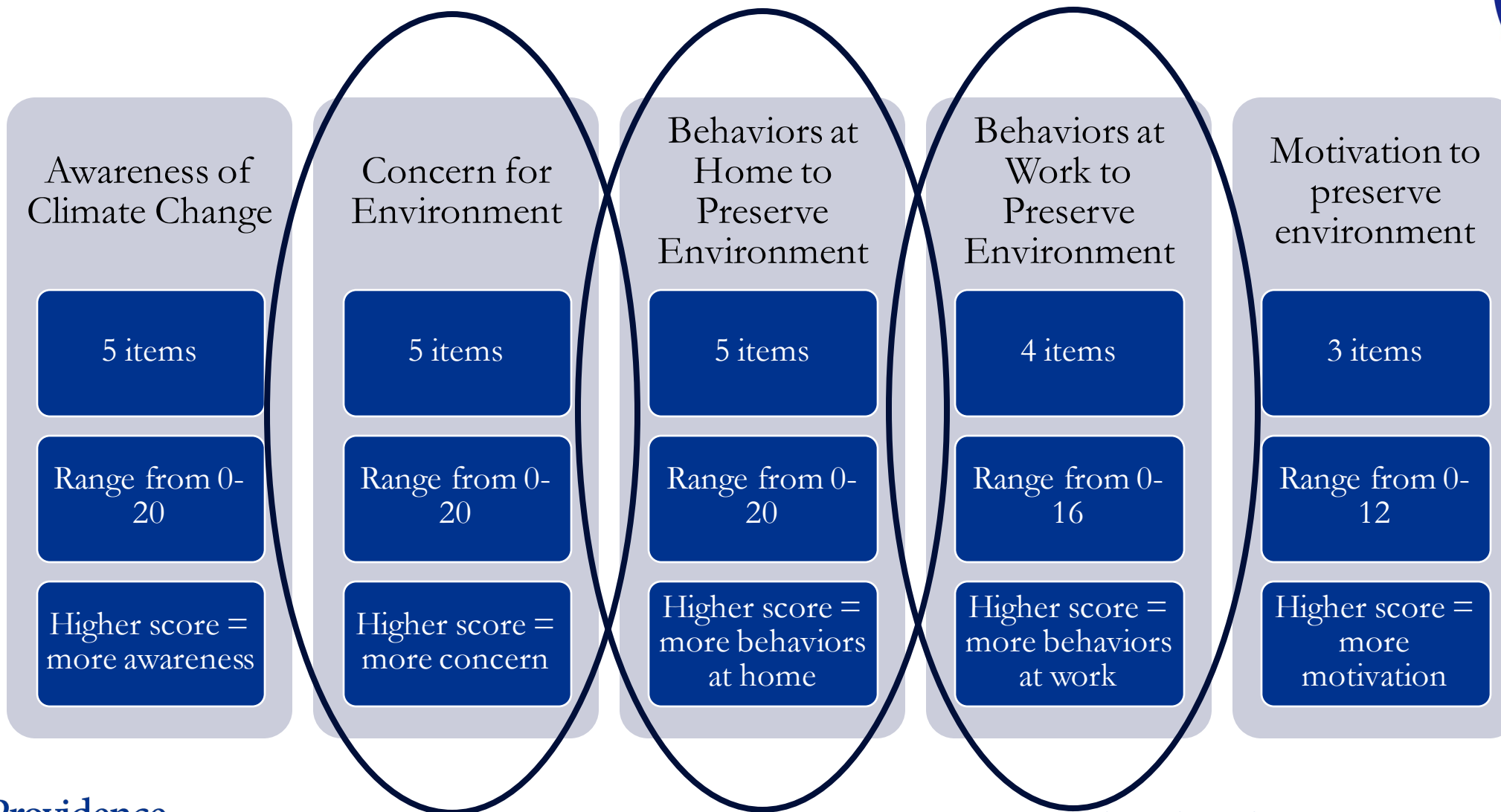


# CHANT Subscales





# CHANT Subscales



# Methods: Measures

## Behaviors at home

- Sample item: How often do you perform the following behaviors at home: - Reduce waste (buy less, reuse more, recycle and compost more) (never, 0 to very frequently 4)

## Behaviors at work

- Sample item: How often do you do the following behaviors at work: Reduce waste (plastic, paper, linen, clinical supplies, etc.) (never, 0 to very frequently 4)

## Concern for environment

- Sample item: How concerned are you about the following, as they relate to climate change? - Changes to the planet (other species, forests, oceans, etc.) (not at all concerned, 0 to very concerned 4)







# Inclusion and Exclusion Criteria and Considerations for Vulnerable Populations

## Inclusion Examples

- All HCP 18 years and older

## Exclusion Examples

- Non-licensed or registered HCP

## Considerations for Vulnerable Populations Examples

- Staff did not receive corrective action if declining to participate
- All data de-identified



# Analysis of Data

- ***Aim #1: Describe HCP climate and health concern and behavior scores on a valid and reliable tool***
  - Descriptive and frequency statistics applied
- ***Aim #2: Test for relationships between the three different scores and HCP age***
  - Spearman's rho test conducted





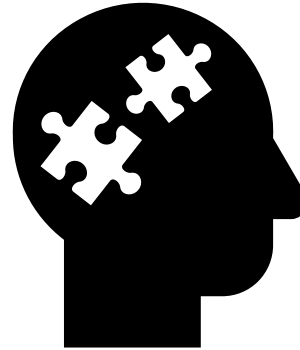
# Findings



- In all, 930 HCP had data included
  
- **Aim 1:**
  1. Average concern score  $14.6 \pm 5.1$  ranging from 0 to 20
    1. Relatively high levels of concerns
  2. Average behaviors at home score  $11.9 \pm 3.7$  ranging from 0 to 20
    1. Relatively high behaviors at home
  3. Average behaviors at work score  $6.0 \pm 3.6$  ranging from 0 to 16
    1. Relatively low behaviors at work



# Findings



## ▪ **Aim 2:**

- *Higher HCP concern related to:*
  - *Higher behaviors at home score (Rho = 0.33,  $p < 0.01$ )*
  - *Higher behaviors at work score (Rho = 0.21,  $p < 0.01$ )*
  - *Age unrelated to concern ( $p > 0.05$ ).*
- *Higher HCP age related to higher behaviors at home score:*
  - *Rho = 0.16,  $p < 0.01$*
- *Higher HCP age related to higher behaviors at work score:*
  - *Rho = 0.21,  $p < 0.01$*

# Discussion

- Most study participants expressed a high degree of concern for the environment, regardless of age
- On average, participants reported low number of behaviors at work to protect climate health
- Those expressing higher concern for the environment were more likely to report more behaviors at work and home to protect climate health
- Older participants were moderately more likely to report more behaviors at work and at home to protect climate health



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# Clinical Implications



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Increasing awareness about climate change may increase individuals' concern about the environment



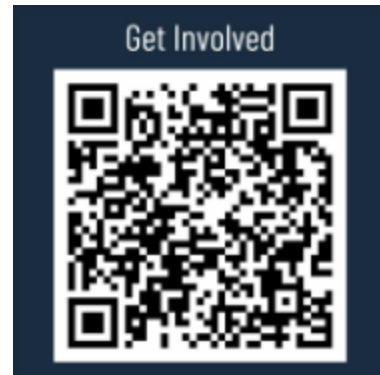
A higher degree of concern about climate change may increase individuals' behaviors to protect climate health



Healthcare leaders should minimize barriers to engaging in behaviors to protect climate health at work

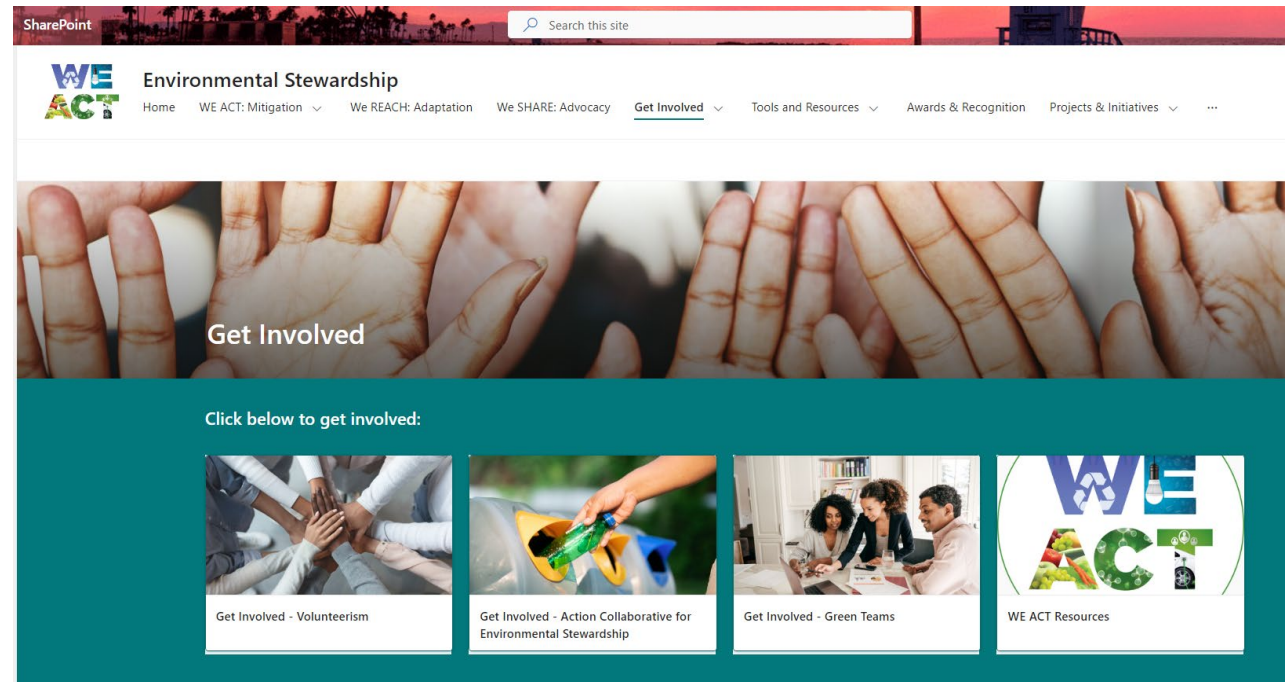
# Clinical Implications – Take action!

- Learn more about how to reduce carbon emissions both at home and at work
- Assess needs for enabling climate protective behaviors in your work environment
- Advocate to work leadership to reduce waste
- Share action items with patients/family/friends/colleagues
- Volunteer on an environmental stewardship committee
- Advocate to politicians



Explore tools specific to Providence to take action

[Get Involved \(sharepoint.com\)](#)



Questions? Thank you

[teresa.rangel@providence.org](mailto:teresa.rangel@providence.org)





# References

## List references here in citation style of your choice

Schenk, E. C. (2019). Environmental stewardship in nursing: Introducing the “WE ACT-PLEASE” framework. *Creative nursing, 25*(3), 222-231.

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# CHANT Overview

Maximum 23 items

Each item is a Likert scale from 0-4

Not all questions required based on relevance

Provides 5 Sub-scales

Each sub-scale can be summed for a score

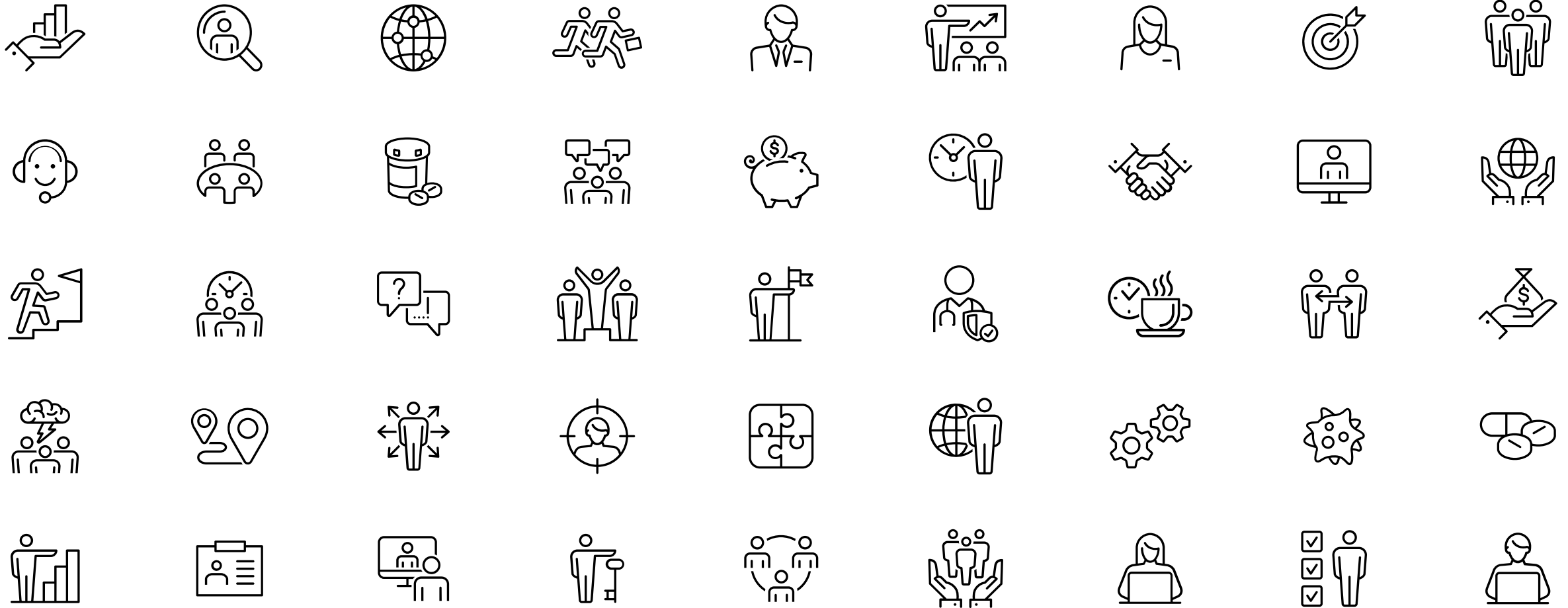
Sub-scales interpreted individually

No total score is calculated

Items may be individually assessed for meaning

May relate demographics to sub-scale or item-level responses

# Icon Library



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