

Advancing Knowledge
of Factors That
Promote Positive
Health and Resilience

# MID-LIFE IN THE UNITED STATES A National Study of Health and Well-Being

Unique
Strengths
of the
MIDUS
Study

In-depth multidisciplinary content achieved via 5 separate data collection projects

Wide age range (25–74) facilitates focus on life course transitions

Longitudinal change (9–10 years) enables assessment of cumulative, long-term influences

Sample includes national twin study allows for study of genetic influences

**Use of data:** 

Wide presence across scientific fields

MIDUS (Midlife in the U.S.) is a national longitudinal study of how many factors (behavioral, social, psychological, biological, neurological) come together to influence health and well-being as people age from early adulthood into midlife and old age. It was conceived by a multidisciplinary team of scholars interested in understanding aging as an integrative process.

# **MIDUS Samples**

In 1995, MIDUS survey data were collected from a total of 7,108 participants. The baseline sample was comprised of individuals from four subsamples: (1) a national RDD (random digit dialing) sample (n=3,487); (2) oversamples from five metropolitan areas in the U.S. (n=757); (3) siblings of individuals from the RDD sample (n=950); and (4) a national RDD sample of twin pairs (n=1,914). All eligible participants were non-institutionalized, English-speaking adults in the contiguous United States, aged 25 to 74.

All respondents were invited to participate in a phone interview of approximately 30 minutes in length and complete 2 self-administered questionnaires (SAQs), each of approximately 45 pages in length.

In addition, the twin subsample was administered a short screener to assess zygosity and other twin-specific information.

With funding provided by the National Institute on Aging, a longitudinal follow-up of MIDUS I began in 2004. Every attempt was made to contact all original respondents and invite them to participate in a second wave of data collection. Of the 7,108 participants in MIDUS I, 4,963 were successfully contacted to participate in another phone interview of about 30 minutes in length. MIDUS II also included two self-administered questionnaires (SAQs), each of about 55 pages in length, which were mailed to participants. The overall response rate for the SAQs was 81%.



MIDUS provided a groundbreaking assessment of numerous psychological constructs in a national sample of Americans.

# **MIDUS CONTENT**

# Sociodemographic

- Factors Age
  - Gender
  - Culture
  - Race/Ethnicity
  - Marital Status
  - Education
  - Income
  - Occupation

# **Genetic Factors**

- Siblings
- Twins

# Life Challenges

#### **Daily Stressors**

(e.g., work overload, family arguments, traffic problems)

## **Chronic Stressors**

(e.g., caregiving, perceived discrimination, perceived inequalities, work-family spillover, childcare difficulties, unemployment)

#### **Acute Events**

(e.g., divorce, remarriage, job change, deaths, relocation)

#### **Health Behaviors**

- Smoking
- Alcohol Consumption
- Physical Activity
- Substance Abuse
- Hormone Therapy
- Preventive Healthcare
- Alternative Healthcare

# **Psychological and Social Factors**

#### **Psychological:**

- Personality
- Affect
- Coping
- Control
- Goal Orientations
- Optimism
- Religion/Spirituality
- Health Beliefs

#### Social:

- Social Support
- Spousal Relations
- Parent-Child Ties
- Childhood Violence
- Social Participation
- Social Responsibility
- Job Characteristics
- Neighborhood Quality

#### **Neurobiological Mechanisms** Cerebral Activation Asymmetry **Prefrontal Function** Amygdala Activation Inflammatory: **Neuroendocrine:** Cardiovascular: Cortisol **Blood Pressure** Interleukin-6 **DHEA-S** Cholesterol s-IL-6r **CRP** Norepinephrine Fibrinogen Glycosyl. Hemog. **ICAM** Epinephrine Heart-Rate Var. E-Selectin

**Allostatic Load** 

#### **Health/Illness**

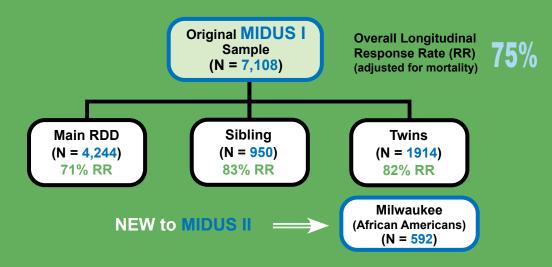
#### Mental:

- Depression
- Anxiety
- Psychological Well-Being
- Cognitive Function

#### Physical:

- Subjective Health
- Health Comparisons
- Chronic Conditions
- Symptoms
- Disability/Functional Limitations
- Mortality

# FIG. 1: MIDUS I samples and follow-up (9–10 years) response rates



# **PROJECT 1**

# (SURVEY OF A NATIONAL SAMPLE)

Assessed a wide array of psychological constructs (e.g., personality, psychological well-being, positive and negative affect, sense of control, goal orientations) and demographic characteristics (e.g., gender, marital status, socioeconomic standing, employment status), along with extensive health measures (mental and physical).

MODE: 30-minute Phone Interview and Two 50-page Self-Administered Questionnaires

# THE MIDUS II PROJECTS

## **PROJECT 2**

(Daily Diary Study)

8 days of daily experience obtained via phone interviews.

(e.g., time use, physical health symptoms and substance use, work productivity, psychological distress)

4 days of salivary cortisol

## **PROJECT 3**

(Cognitive Functioning)

# Phone-based cognitive battery

(e.g., episodic verbal memory, working memory, verbal ability and speed, fluid intelligence/reasoning, speed of processing, episodic verbal memory/forgetting)

Face-to-face assessment of cognitive capacities

#### **PROJECT 4**

(Biomarkers)

2-Day Clinic Visit: Biomarkers—neuroendocrine, cardiovascular, immune, bone

Physical exam

Medical history

Medications

Sleep assessments

Laboratory challenge study—heart-rate variability, blood pressure, cortisol

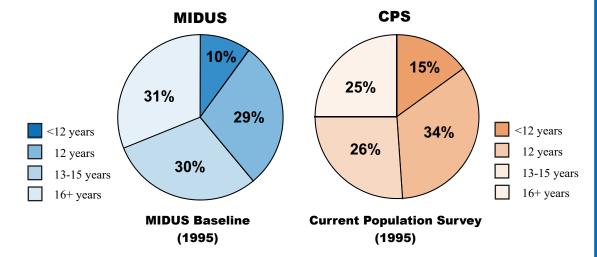
#### **PROJECT 5**

(Neuroscience)

# Affective reactivity & recovery:

- baseline electroencephalography (EEG)
- task-related EEG
- task-related electromyography (EMG; eyeblink startle response, post auricular startle reflex, corrugator supercilli activity)
- structural MRI of neuroanatomy
- task event-related fMRI

# **Educational Distribution of MIDUS Respondents**



Education levels at baseline (1995/96) show that **MIDUS** respondents had slightly higher education levels, but were generally representative of the U.S. population (Current Population Survey, Oct., 1995).

The MIDUS

study has so far generated over 200 publications in diverse scientific fields.

# **Illustrative MIDUS Questions**

Does aging (from early adulthood to old age) bring about change in personality traits, psychological well-being, emotion regulation, sense of control, cognitive performance, daily stress? For whom (e.g., men, women)?

How is health (mental, physical) affected by:

- social inequalities (in education, income, life stress)?
- life transitions (marital, parental, occupational)?
- daily stressors (at work, at home)?
- social relationships (friends, family)?
- chronic stress (caregiving, perceived discrimination)?
- religion and spirituality?
- genetic factors?

What are the biological and neurological mechanisms through which the above factors influence health?

Are some people resilient in the face of life challenges? What factors are protective?

# **Data and documentation** available to the public.

MIDUS related materials are archived at the University of Michigan and can be publicly accessed on the web at: icpsr.umich.edu

Datasets are available in a wide array of formats, with accompanying user-friendly codebooks and documentation.





# STUDYSPONSORS

## MIDUS I

was funded by a grant from the John D. and Catherine T. MacArthur Foundation

## **MIDUS II**

was funded by the National Institute on Aging at the National Institutes of Health.

# **Contact/Questions**

For further information, please contact:

midus.wisc.edu/ helpdesk.php



A National Study of Health & Well-Being

UW Institute on Aging 1300 University Avenue, 2245 MSC Madison, WI 53706 Phone: 608.262.1818