MIDUS
Midlife in the United States

A National Study of Health & Well-Being

Documentation of Constructed Variables
for
MIDUS 2 (M2) Survey and
O*NET 2004 (7.0) Database Linkage

This document provides details about how summary score variables were constructed from the 2004 O*NET database for linking with the MIDUS 2 (M2) Survey data. The resulting constructed variables can be found in this standalone dataset:

M2_ONET2004_N3362_20220222.sav

The constructed summary scores were based on data descriptors outlined by O*NET and were current as of June 2021. For more details, see the O*NET data descriptors page: https://www.onetonline.org/find/descriptor/browse.

A. What information from the O*NET database is included in this dataset?

O*NET is the nation's primary occupational information source. It contains specific data on hundreds of standardized occupation-specific descriptors on over 1,000 Standard Occupational Classification (SOC) occupations. These descriptions include generalized work activities, features of the work organization, and other physical and social features shaping the nature of the work. These descriptions are organized and coded as variables in seven different O*NET dimensions:

1. Abilities
2. Occupational Interests
3. Work Values
4. Skills
5. Knowledge
6. Work Activities
7. Work Context

Please note that **Work Styles** is not available in M2 data. Due to the limited number of SOC categories available in the 2004 O*NET, Work Styles was not linked to MIDUS 2 sample.

1. Abilities (IM & LV): Enduring attributes of the individual that influence performance The Abilities questionnaire consists of two question types for every attribute:
   a) How *important* (IM) is the ability to your current job? (scale 1 (not important) to 5 (extremely important)); and
   b) What *level* (LV) of ability is needed to perform your current job? (scale 1 (lowest) to 7 (highest)).
   Note: The Abilities questionnaire is available for public use
   https://www.onetcenter.org/dl_files/MS_Word/Abilities.pdf

2. Occupational Interests: Preferences for work environments. Occupational Interest Profiles (OIPs) are compatible with Holland's model of personality types and work environments[1]. The profiles are based on six descriptors: realistic, investigative, artistic, social, enterprising, and conventional. There is no questionnaire available for this dataset.

3. Work Values. Global aspects of work composed of specific needs that are important to a person's satisfaction. Occupational Reinforcer Patterns (ORPs) are based on the Theory of Work Adjustment[2]. There is no questionnaire available for this dataset.

4. Skills (IM & LV). Developed capacities that facilitate learning or the more rapid acquisition of knowledge and performance of activities that occur across jobs. The Skills questionnaire consists of two question types:
   a) How *important is* the skill to the performance of your current job? (scale 1 (not important) to 5 (extremely important)); and
   b) What *level* of the skill is needed to perform your current job? (scale 1 (lowest) to 7 (highest)).
   Note: The Skills questionnaire is available for public use
   https://www.onetcenter.org/dl_files/MS_Word/Skills.pdf

5. Knowledge (IM & LV). Organized sets of principles and facts applying in general domains. The Knowledge questionnaire consists of two question types:
   a) How *important* is the knowledge area to the performance of your current job? (scale 1 (not important) to 5 (extremely important)); and
   b) What *level* of the knowledge is needed to perform your current job? (scale 1 (lowest) to 7 (highest)).
   Note: The Knowledge questionnaire is available for public use
   https://www.onetcenter.org/dl_files/MS_Word/Knowledge.pdf

6. Work Activities (IM & LV). Work activities across a number of occupations. They are performed in many job families and industries. The Activities questionnaire consists of two question types:
   a) How *important* is the activity to your current job? (scale 1 (not important) to 5 (extremely important)); and
   b) What *level* of the activity is needed to perform your current job? (scale 1 (lowest) to 7 (highest)).
   Note: The Activities questionnaire is available for public use
   https://www.onetcenter.org/dl_files/MS_Word/Generalized_Work_Activities.pdf

7. Work Context (CX & CT). Physical and social factors that influence the nature of work The Work Context questionnaire is partitioned into two components: CX and CT. The CX component comprises the majority of the variables and asks questions to best describe the

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[1] Holland JL. Making vocational choices: A theory of vocational personalities and work environments, 3rd ed. Making vocational choices: A theory of vocational personalities and work environments, 3rd ed. Odessa, FL, US: Psychological Assessment Resources; 1997. xiv, 303–xiv, 303.

[2] Dawis R V., Lofquist LH. A psychological theory of work adjustment : an individual-differences model and its applications. 6th ed. Minneapolis: University of Minnesota Press; 1984.

participant's *current job* on a scale of 1 (not important) to 5 (extremely important)). The CT component includes two questions (on a scale of 1 to 3):
a) How regular is your work schedule on your current job?
b) How many hours do you work in a typical week on your current job?
Note: The Work Context questionnaire is available for public use
https://www.onetcenter.org/dl_files/MS_Word/Work_Context.pdf

Variables from these datasets were linked to the M2 Survey sample where appropriate.

B. How were O*NET summary score variables constructed, and what do they represent?
The seven dimensions outlined above resulted in 12 distinct occupational datasets. In each of the 12 datasets, the variables described different characteristics of occupations for each linked SOC code. Variables from these datasets were linked to the M2 Survey sample where appropriate.

Some datasets contained variables representing the average Importance (IM) and Level of Ability (LV) for each SOC code defined in O*NET. Questions that asked about the average Importance (IM) were rated on a 1-5 scale. Questions about the average Level of Ability (LV) were rated on a 1-7 scale. Furthermore, some variables were grouped into constructs, as outlined by O*NET, and summary score variables were computed. Not all 12 datasets have constructed variables. Those which do are outlined below:

The list below displays the MIDUS variable names for all the constructed summary score variables in the resulting dataset. Constructed summary scores were computed based on O*NET recommendations and double-checked using Factor Analysis.

1. Abilities (IM & LV)

The Abilities questionnaire is sub-divided into four constructs: Cognitive abilities, Physical abilities, Psychomotor abilities, and Sensory abilities.

a) Cognitive Abilities - Abilities that influence the acquisition and application of knowledge in problem-solving, including following 21 items:
   - Category flexibility, Deductive reasoning, flexibility of closure, Fluency of Ideas, Inductive Reasoning, Information Ordering, Mathematical Reasoning, Memorization, Number Facility, Oral Comprehension, Oral Expression, Originality, Perceptual Speed, Problem Sensitivity, Selective Attention, Spatial Orientation, Speed of Closure, Time-Sharing, Visualization, Written Comprehension, Written Expression

b) Physical Abilities - Abilities that influence strength, endurance, flexibility, balance, and coordination, including following 9 items:
   - Dynamic Flexibility, Dynamic Strength, Explosive Strength, Extent Flexibility, Gross Body Equilibrium, Stamina, Static Strength, Trunk Strength, Gross Body Coordination

c) Psychomotor Abilities - Abilities that influence the capacity to manipulate and control objects, including following 10 items:

- Arm-Hand Steadiness, Control Precision, Finger Dexterity, Manual Dexterity, Multi-limb Coordination, Rate Control, Reaction Time, Response Orientation, Speed of Limb Movement, Wrist Finger Speed

d) Sensory Abilities - Abilities that influence visual, auditory, and speech perception, including following 12 items:
   - Auditory attention, depth perception, far vision, glare sensitivity, hearing sensitivity, near vision, night vision, peripheral vision, sound localization, speech clarity, speech recognition, visual color discrimination.

Variables constructed from Ability questionnaire

Constructed Variable	Description	Reliability Alpha
B1ABIMCOGABIL	Abilities-Important: Cognitive Abilities (Mean)	.934
B1ABLVCOGABIL	Abilities-Level: Cognitive Abilities (Mean)	.957
B1ABIMPHYSABIL	Abilities-Important: Physical Abilities (Mean)	.957
B1ABLVPHYSABIL	Abilities-Level: Physical Abilities (Mean)	.961
B1ABIMPSYCHABIL	Abilities-Important: Psychomotor Abilities (Mean)	.933
B1ABLVPSYCHABIL	Abilities-Level: Psychomotor Abilities (Mean)	.937
B1ABIMSENSABIL	Abilities-Important: Sensory Abilities (Mean)	.836
B1ABLVSENSABIL	Abilities-Level: Sensory Abilities (Mean)	.855

2. Skills (IM & LV)

The Skills questionnaire is sub-divided into six constructs: Basic skill, Complex problem solving, Resource management skill, Social skills, Systems skills, and Technical skills

a) Basic skills - Developed capacities that facilitate learning or the more rapid knowledge acquisition, including following 10 items:
   - Active learning, active listening, critical thinking, learning strategies, mathematics, monitoring, reading comprehension, science, speaking, writing.

b) Complex problem-solving skills – This variable is an exception and is a stand-alone construct, including only one item:
   - Complex Problem Solving

c) Resource management skills - Developed capacities used to allocate resources efficiently, including following 4 items:
   - Management of financial resources, management of material resources, management of personnel resources, time management.

d) Social skills - Developed capacities used to work with people to achieve goals, including following 6 items:
   - Coordination, instructing, negotiation, persuasion, service orientation, social perceptiveness,

e) Systems skills - Developed capacities used to understand, monitor, and improve socio-technical systems, including following 3 items:

- Judgement and decision making, systems analysis, systems evaluation.

f) Technical skills - Developed capacities used to design, set up, operate, and correct malfunctions involving the application of machines or technological systems, including following 11 items:
   - Equipment maintenance, equipment selection, installation, operation and control, operation monitoring, operations analysis, programming, quality control analysis, repairing, technology design, troubleshooting.

Variables constructed from Skill questionnaire

Constructed Variable	Description	Reliability Alpha
B1SKIMBASICSK	Skills-Important: Basic Skills (Mean)	.944
B1SKLVBASICSK	Skills-Level: Basic Skills (Mean)	.969
B1SKIMMANAGESK	Skills-Important: Resource Management Skills (Mean)	.897
B1SKLVMANAGESK	Skills-Level: Resource Management Skills (Mean)	.932
B1SKIMSOCIALSK	Skills-Important: Social Skills (Mean)	.948
B1SKLVSOCIALSK	Skills-Level: Social Skills (Mean)	.969
B1SKIMSYSTEMSK	Skills-Important: Systems Skills (Mean)	.919
B1SKLVSYSTEMSK	Skills-Level: Systems Skills (Mean)	.932
B1SKIMTECHSK	Skills-Important: Technical Skills (Mean)	.900
B1SKLVTECHSK	Skills-Level: Technical Skills (Mean)	.922

3. Work Activities (IM & LV)

The Activities questionnaire is sub-divided into four constructs: Information input, Interacting with others, Mental processes, and Work output.

a) Information input - Where and how are the information and data gained that are needed to perform this job, including following 5 items:
   - Estimating the Quantifiable Characteristics of Products, Events, or Information, Getting Information, Identifying Objects, Actions, and Events, Inspecting Equipment, Structures, or Material, Monitor Processes, Materials, or Surroundings

b) Interacting with others - What interactions with other persons or supervisory activities occur while performing this job, including following 17 items:
   - Assisting and Caring for Others, Coaching and Developing Others, Communicating with Persons Outside Organization, Communicating with Supervisors, Peers, or Subordinates, Coordinating the Work and Activities of Others, Developing and Building Teams, Establishing and Maintaining Interpersonal Relationships, Guiding, Directing, and Motivating Subordinates, Interpreting the Meaning of Information for Others, Monitoring and Controlling Resources, Performing Administrative Activities, Performing for or Working Directly with the Public, Provide Consultation and Advice to Others, Resolving Conflicts and Negotiating with Others, Selling or Influencing Others, Staffing Organizational Units, Training and Teaching Others

c) Mental Processes - What processing, planning, problem-solving, decision-making, and innovating activities are performed with job-relevant information, including following 10 items:
   - Analyzing Data or Information, Developing Objectives and Strategies, Evaluating Information to Determine Compliance with Standards, Judging the Qualities of Things, Services, or People, Making Decisions and Solving Problems, Organizing, Planning, and Prioritizing Work, Processing Information, Scheduling Work and Activities, Thinking Creatively, Updating and Using Relevant Knowledge

d) Work Output - What physical activities are performed, what equipment and vehicles are operated/controlled, and what complex/technical activities are accomplished as job outputs, including following 9 items:
   - Controlling Machines and Processes, Documenting/Recording Information, Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment, Handling and Moving Objects, Interacting With Computers, Operating Vehicles, Mechanized Devices, or Equipment, Performing General Physical Activities, Repairing and Maintaining Electronic Equipment, Repairing and Maintaining Mechanical Equipment

Variables constructed from work activities questionnaire

Constructed Variable	Description	Reliability Alpha
B1WAIMINFOINPUT	Work Activities-Important: Information Input (Mean)	.706
B1WALVINFOINPUT	Work Activities-Level: Information Input (Mean)	.866
B1WAIMINTERWOTH	Work Activities-Important: Interacting with Others (Mean)	.968
B1WALVINTERWOTH	Work Activities-Level: Interacting with Others (Mean)	.975
B1WAIMMENTAL	Work Activities-Important: Mental Processes (Mean)	.944
B1WALVMENTAL	Work Activities-Level: Mental Processes (Mean)	.973
B1WAIMWKOUPUT	Work Activities-Important: Work Output (Mean)	.498
B1WALVWKOUPUT	Work Activities-Level: Work Output (Mean)	.683

4. Work Context (CX & CT)

The Context questionnaire is sub-divided into three constructs: Interpersonal relationships, Physical work conditions, and Structural job characteristics.

The Work Context questionnaire did not measure IM or LV variables. Instead, variables were measured on a 1-5 (CX) or 1-3 (CT) scale.

Due to a significant amount of missing data for some items used to construct the composite scores, we created two versions for each construct – one with reduced items (only using the items without missing values), another one with all intended items but only constructed for the cases without missing values.

a) Interpersonal Relationships - This category describes the context of the job in terms of human interaction processes, including following 14 items:

i. Contact With Others, Coordinate or Lead Others, Deal With External Customers, Deal With Physically Aggressive People, Deal With Unpleasant or Angry People, Frequency of Conflict Situations, Responsibility for Outcomes and Results, Responsible for Others' Health and Safety,

ii. Electronic Mail, Face-to-Face Discussions, Letters and Memos, Public Speaking, Telephone, Work With Work Group or Team

The 8 items listed in (i) are used to construct B1CXINTERPERS_1, and all 14 items listed in both (i) and (ii) are used to construct B1CXINTERPERS_2.

b) Physical Work Conditions - This category describes the work context as it relates to the interactions between the worker and the physical job environment, including following 30 items:
i. Cramped Work Space, Awkward Positions, Exposed to Contaminants, Exposed to Disease or Infections, Exposed to Hazardous Conditions, Exposed to Hazardous Equipment, Exposed to High Places, Exposed to Minor Burns, Cuts, Bites, or Stings, Exposed to Radiation, Exposed to Whole Body Vibration, Extremely Bright or Inadequate Lighting, Indoors-Environmentally Controlled, Outdoors-Exposed to Weather, Sounds, Noise Levels Are Distracting or Uncomfortable, Spend Time Bending or Twisting the Body, Spend Time Climbing Ladders, Scaffolds, or Poles, Spend Time Keeping or Regaining Balance , Spend Time Kneeling, Crouching, Stooping, or Crawling, Spend Time Making Repetitive Motions, Spend Time Sitting, Spend Time Standing, Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls, Spend Time Walking and Running, Very Hot or Cold Temperatures, Wear Common Protective or Safety Equipment such as Safety Shoes, Glasses, Gloves, Hearing Protection, Hard Hats, or Life Jackets, Wear Specialized Protective or Safety Equipment such as Breathing Apparatus, Safety Harness, Full Protection Suits, or Radiation Protection

ii. Indoors-Not Environmentally Controlled, Outdoors-Under Cover, In an Open Vehicle or Equipment, In an Enclosed Vehicle or Equipment, Physical Proximity

The 25 items listed in (i) are used to construct B1CXPHYWKCOND_1, and all 30 items listed in both (i) and (ii) are used to construct B1CXPHYWKCOND_2.

c) Structural Job Characteristics - This category involves the relationships or interactions between the worker and the structural characteristics of the job, including following 13 items:
i. Consequence of Error, Degree of Automation, Importance of Being Exact or Accurate, Importance of Repeating Same Tasks, Pace Determined by Speed of Equipment

ii. Duration of Typical Work Week, Freedom to Make Decisions, Frequency of Decision Making, Impact of Decisions on Co-workers or Company Results, Level of Competition, Structured versus Unstructured Work, Time Pressure, Work Schedules

The 5 items listed in (i) are used to construct B1CXCTJOBCHAR_1, and all 13 items listed in both (i) and (ii) are used to construct B1CXCTJOBCHAR_2.

Variables constructed from work context questionnaire

Constructed Variable	Description	Reliability Alpha
B1CXINTERPERS_1	Work Context-CX: Interpersonal Relationships (Mean), Items=8, N=3,362	.933
B1CXINTERPERS_2	Work Context-CX: Interpersonal Relationships (Mean), Items=14, N=1,835	.849
B1CXPHYWKCOND_1	Work Context-CX: Physical Work Conditions (Mean), Items=25, N=3,362	.898
B1CXPHYWKCOND_2	Work Context-CX: Physical Work Conditions (Mean), Items=30, N=1,835	.875
B1CXCTJOBCHAR_1	Work Context-CX&CT: Structural Job Characteristics (Mean), Item=5, N=3,362	.634
B1CXCTJOBCHAR_2	Work Context-CX&CT: Structural Job Characteristics (Mean), Item=13, N=1,835	.740