



Neuropsychological Assessment Battery™

Psychometric and Technical Manual

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3

Standardization

LOCATION AND TESTING OF THE SAMPLE

Description of the Standardization Sites

Standardization data collection started in September of 2001 and concluded in October of 2002. The NAB standardization data were collected at five sites, which were selected to provide representation in each of the four geographic regions of the U.S. Four of the sites were located at academic institutions with known expertise in neuropsychology: Rhode Island Hospital, University of Florida Health Science Center, Indiana University, and University of California at Los Angeles School of Medicine. The publisher's offices in Florida served as the fifth site. Each site was supervised by a senior neuropsychologist serving as the principal site investigator. These individuals coordinated all activities at their respective sites, including examiner training, examinee recruitment, administration of the NAB, and quality assurance. Each site also employed a site coordinator, who was typically a post-doctoral fellow in neuropsychology. NAB standardization examiners had a minimum of advanced post baccalaureate training in psychological assessment, but most were advanced doctoral students, interns, or fellows in clinical psychology. Sites employed between two and six examiners during the course of standardization.

Participant Recruitment

The publisher monitored the recruitment of standardization participants to ensure that the sampling plan matrix was closely matched. The use of a recruitment website, accessible to all site coordinators, facilitated the monitoring process.

Exclusionary Criteria

Prior to participation, potential participants were screened and eliminated for the following characteristics that might interfere with their performance: (a) uncorrected hearing loss or visual impairment; (b) color blindness; (c) physical impairment affecting upper extremity motor function; (d) currently taking antidepressant, antianxiety, or

antipsychotic medication; (e) currently undergoing treatment for alcohol or drug abuse; (f) consumption of more than three alcoholic beverages on more than two nights a week; (g) a history of any period of unconsciousness for 30 minutes or more; (h) a history of a head injury that required hospitalization for more than 24 hours; (i) a history of treatment with electroconvulsive therapy; or (j) currently undergoing treatment or evaluation for memory or cognitive problems. Participants were also excluded if their medical history included any of the following: stroke, epilepsy, brain surgery, encephalitis, meningitis, multiple sclerosis, Parkinson's disease, Huntington's chorea, Alzheimer's disease, schizophrenia, bipolar disorder, human immunodeficiency virus (HIV), and/or adult attention-deficit/hyperactivity disorder (ADHD). In addition to the exclusionary criteria described, 14 participants who were judged to be disoriented on the basis of their Orientation (ORN) scores, were removed from the sample postcollection.

QUALITY CONTROL

The quality control procedures utilized in collecting the NAB standardization data were developed in order to ensure proper test administration, reliable scoring methods, and accurate data entry.

Examiner Training

All examiners were required to review and study training materials, which included administration and scoring guidelines as well as a training video. After studying these materials, examiners practiced administering the NAB several times. Following this training, each examiner submitted a videotape of a practice protocol, which was evaluated by the senior author in terms of the examiner's adherence to administration instructions and scoring accuracy. Examiners received comprehensive written and oral feedback on the administration and scoring of their practice case. So that consistency was maintained throughout data collection, any questions regarding administration procedures were addressed by the publisher and authors.

Interrater Reliability Studies

In addition to examiner training, interrater reliability studies were conducted to further confirm examiners' scoring accuracy. Because the scoring criteria for most of the NAB subtests are simple and objective, interrater reliability studies were targeted at subtests that require examiner judgment. Therefore, interrater studies were conducted on the Writing, Story Learning, Figure Drawing, Judgment, and Categories subtests. Two trained research assistants (both post baccalaureate in psychology) independently scored 60 randomly selected standardization protocols (Form 1, $n = 30$; Form 2, $n = 30$). Each of the raters was blind to the other's scores, and each rater scored subtests according to the scoring procedures and criteria described in chapter 5 of this manual and in chapter 4 of the *NAB Administration, Scoring, and Interpretation Manual* (Stern & White, 2003). Overall, results indicated high interrater agreement, confirming the ability of the NAB to be scored accurately and consistently. The interrater reliability studies are described in greater detail in chapter 5 (Reliability and Score Differences) of this manual.

Veracity of Scoring and Data Entry

Initial scoring of all protocols was provided by the examiner who performed the assessment. Following the initial scoring, another examiner at the same site rescored the protocol. Subsequently, each protocol was then sent to the publisher where it was again rescored. All discrepancies were resolved at this time, and each examiner was then given feedback based on this continual review process. Once the scoring of a protocol was complete, the information was entered by a trained data entry specialist. To enhance data entry procedures, randomly selected protocols were chosen and checked for accuracy throughout the course of data entry. The specialist then received feedback regarding any errors, and additional training was provided if needed.

Other Quality Assurance Procedures

Several additional quality assurance procedures were employed. First, data-cleaning procedures involved calculating frequencies for every variable, followed by an examination of any out-of-range values. Next, in order to decrease scoring errors, all summed NAB scores were calculated electronically. Overall, the quality assurance procedures utilized throughout standardization and validation helped to reduce errors and enhance the accuracy of the data.

DESCRIPTION OF THE SAMPLES

Overview

Neuropsychological assessment can have different goals and attempt to answer different referral questions. These diverse applications may require different normative comparison groups. For inferring brain-behavior relationships, it has been well established in the neuropsychological literature that demographically corrected norms are the most appropriate normative standard (Heaton et al., 1993; Heaton et al., 1991; Lezak, 1995; Mitrushina et al., 1998; Spreen & Strauss, 1998). The research literature has clearly established that performance on a neuropsychological test can be significantly affected by an individual's age, educational attainment, and sex, irrespective of potential brain dysfunction. Thus, interpretation of brain-behavior relationships should be based on normative data either categorized according to different groupings of these demographic variables or "corrected for" the effect of these variables. Alternatively, some interpretive questions may be answered best by comparing an individual's performance to that of an age-referenced sample that closely matches the U.S. population on a variety of demographic characteristics, including age, education, and sex, as well as race/ethnicity and geographic region.

The NAB provides normative tables for both interpretive applications. Demographically corrected norms ($N = 1,448$) are provided for interpretation of brain-behavior relationships. The NAB age-based, U.S. Census-matched sample ($N = 950$) consisted of a subsample of the overall NAB standardization sample, and norm tables are provided for this sample as well. *However, the demographically corrected norms are recommended for most situations encountered in clinical practice and, thus, they are the primary normative standard. All normed scores presented in the psychometric analyses and tables in chapters 5 (Reliability) and 6 (Validity) are based on the demographically corrected norms.*

Sampling Methodology

It is a very time-consuming and expensive endeavor to administer a comprehensive neuropsychological test battery to a large sample of healthy, normal individuals. Past efforts at creating demographically corrected normative samples have been criticized for not having sufficient participants in the sample or for having too few participants in each normative

table (Fastenau & Adams, 1996). Because the primary goal of the NAB standardization sampling plan was to collect data for demographically corrected norms, the sampling matrix was constructed to obtain (a) a relatively large overall standardization sample and (b) sufficient participants in each Age x Education x Sex group to provide stable estimates of performance. This latter goal required a significant oversampling of older participants and individuals with both low and high levels of educational attainment.

From the total NAB standardization sample ($N = 1,448$), the age-based, U.S. Census-matched standardization sample ($N = 950$) was abstracted to closely match the proportions of the current U.S. population as defined by the *Current Population Survey, March 2001* (U.S. Bureau of the Census, 2001) with respect to education, sex, race/ethnicity, and geographic region.

Demographically Corrected Standardization Sample

The demographically corrected standardization sample consisted of 1,448 healthy, community-dwelling individuals ranging in age from 18 to 97 years. Of these 1,448 participants, 711 received Form 1 and 737 received Form 2 as part of the standardization study; no participant completed both NAB forms. Table 3.1 presents the percentages of the U.S. population and the NAB demographically corrected standardization sample with respect to sex, race/ethnicity, education, and geographic region. Table 3.2 presents detailed percentages of the NAB demographically corrected standardization sample according to age, race/ethnicity, and education. Table 3.3 presents percentages of the demographically corrected sample according to age, sex, and education. Table 3.4 presents actual numbers of participants in the

demographically corrected sample according to age, sex, and education. Table 3.5 presents percentages of the demographically corrected sample according to age, sex, and race/ethnicity. Table 3.6 presents the percentages of the demographically corrected sample according to age, race/ethnicity, and geographic region. Table 3.7 presents the number of participants in each Age x Sex x Education x Form cell. The effects of oversampling in older age ranges, lower education levels, and higher education levels are apparent, as are the lower percentages of racial/ethnic minorities relative to the entire sample of 1,448 participants.

Age-Based, U.S. Census-Matched Standardization Sample

Table 3.8 presents the percentages of the U.S. population and the NAB age-based, U.S. Census-matched standardization sample ($N = 950$) with respect to sex, race/ethnicity, education, and geographic region. Tables 3.9 and 3.10 present percentages of the U.S. population and the NAB age-based, U.S. Census-matched sample according to age, race/ethnicity, and education. Tables 3.11 and 3.12 present detailed percentages of the U.S. population and the NAB age-based, U.S. Census-matched sample according to age, sex, and education. Tables 3.13 and 3.14 present percentages of the U.S. population and the NAB age-based, U.S. Census-matched sample according to age, sex, and race/ethnicity. Tables 3.15 and 3.16 present percentages of the U.S. population and the NAB age-based, U.S. Census-matched sample according to age, race/ethnicity, and geographic region. These data indicate that the NAB age-based, U.S. Census-matched standardization sample is closely proportionate to the current U.S. population in terms of the various demographic variables.

Table 3.1
Percentages of the U.S. Population and the NAB Demographically
Corrected Standardization Sample by Demographic Characteristic

Demographic variable	U.S. population (%)	NAB demographically corrected standardization sample (%)^a
Sex		
Female	51.1	53.5
Male	48.9	46.5
Race/Ethnicity		
Caucasian	72.9	84.8
African American	11.6	6.9
Hispanic	10.7	4.8
Other	4.8	3.5
Education		
≤ 11 years	21.2	20.9
12 years	30.5	22.7
13-15 years	25.8	27.1
≥ 16 years	22.4	29.4
Geographic region		
Northeast	18.9	21.3
Midwest	23.0	23.0
South	35.0	33.1
West	23.0	22.6

Note. U.S. population data are from the *Current Population Survey, March 2001* [Data file]. Washington, DC: U.S. Bureau of the Census.

^a*N* = 1,448.

Table 3.2
Percentages of the NAB Demographically Corrected Standardization Sample by Age, Race/Ethnicity, and Education

Age (years)	n	Caucasian (%)			African American (%)			Hispanic (%)			Other (%)		
		≤11YE	12YE	13-15YE	≥16YE	≤11YE	12YE	13-15YE	≥16YE	≤11YE	12YE	13-15YE	≥16YE
18-29	173	12.1	11.6	16.2	17.3	1.7	3.5	7.5	2.3	2.9	2.3	8.7	2.3
30-39	114	15.8	10.5	14.9	26.3	5.3	3.5	1.8	1.8	3.5	1.8	5.3	4.4
40-49	134	7.5	19.4	23.1	20.9	7.5	3.7	4.5	5.2	0.7	0.0	3.7	1.5
50-59	186	18.3	21.0	21.5	25.8	2.2	1.6	3.2	1.1	1.6	0.5	0.0	0.5
60-64	162	21.0	23.5	22.8	25.9	1.9	0.6	0.6	0.6	0.6	0.0	1.9	0.0
65-69	171	21.6	24.6	22.2	23.4	1.2	1.2	0.0	0.6	0.0	0.6	1.2	0.0
70-74	173	22.0	23.1	22.5	26.6	0.0	1.2	0.6	0.0	0.6	0.6	0.0	0.6
75-79	156	22.4	23.1	25.6	25.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
80-97	179	15.6	20.7	22.9	38.0	0.6	0.0	0.0	0.6	0.0	0.6	0.0	0.0
Total	1,448												

Note. YE = years of education.

Table 3.3
Percentages of the NAB Demographically Corrected
Standardization Sample by Age, Sex, and Education

Age (years)	n	Female (%)				Male (%)			
		≤11YE	12YE	13-15YE	≥16YE	≤11YE	12YE	13-15YE	≥16YE
18-29	173	9.2	10.4	22.5	16.2	8.1	8.7	16.2	8.7
30-39	114	11.4	6.1	12.3	20.2	13.2	9.6	11.4	15.8
40-49	134	9.0	12.7	17.9	17.2	8.2	10.4	13.4	11.2
50-59	186	10.8	12.4	15.1	16.7	11.3	10.8	10.8	12.4
60-64	162	11.7	13.0	13.0	13.6	11.7	11.1	12.3	13.6
65-69	171	11.1	13.5	13.5	12.3	11.7	13.5	11.7	12.9
70-74	173	11.6	12.7	12.1	15.6	11.0	12.1	11.6	13.3
75-79	156	11.5	12.8	13.5	12.8	11.5	10.9	12.8	14.1
80-97	179	7.8	12.3	15.1	20.7	8.4	8.9	8.4	18.4
Total	1,448								

Note. YE = years of education.

Table 3.4
Number of Participants in the NAB Demographically Corrected
Standardization Sample by Age, Sex, and Education

Age (years)	n	Female				Male			
		≤11YE	12YE	13-15YE	≥16YE	≤11YE	12YE	13-15YE	≥16YE
18-29	173	16	18	39	28	14	15	28	15
30-39	114	13	7	14	23	15	11	13	18
40-49	134	12	17	24	23	11	14	18	15
50-59	186	20	23	28	31	21	20	20	23
60-64	162	19	21	21	22	19	18	20	22
65-69	171	19	23	23	21	20	23	20	22
70-74	173	20	22	21	27	19	21	20	23
75-79	156	18	20	21	20	18	17	20	22
80-97	179	14	22	27	37	15	16	15	33
Total	1,448								

Note. YE = years of education.

Table 3.5
Percentages of the NAB Demographically Corrected
Standardization Sample by Age, Sex, and Race/Ethnicity

Age (years)	<i>n</i>	Female (%)				Male (%)			
		Caucasian	African American	Hispanic	Other	Caucasian	African American	Hispanic	Other
18-29	173	32.4	9.8	10.4	5.8	24.9	5.2	5.8	5.8
30-39	114	35.1	3.5	7.9	3.5	32.5	8.8	7.0	1.8
40-49	134	44.0	8.2	3.7	0.7	26.9	12.7	2.2	1.5
50-59	186	46.2	4.8	1.1	2.7	40.3	3.2	1.6	0.0
60-64	162	46.9	1.9	1.9	0.6	46.3	1.9	0.6	0.0
65-69	171	47.4	1.8	0.6	0.6	44.4	1.2	1.2	2.9
70-74	173	50.3	0.0	0.0	1.7	43.9	1.7	1.7	0.6
75-79	156	47.4	0.6	0.0	2.6	49.4	0.0	0.0	0.0
80-97	179	53.6	1.1	1.1	0.0	43.6	0.0	0.0	0.6
Total	1,448								

Table 3.6
Percentages of the NAB Demographically Corrected Standardization Sample
by Age, Race/Ethnicity, and Geographic Region of the U.S.

Age (years)	n	Caucasian (%)				African American (%)				Hispanic (%)				Other (%)			
		NE	MW	S	W	NE	MW	S	W	NE	MW	S	W	NE	MW	S	W
18-29	173	5.2	16.8	26.0	9.2	3.5	1.7	6.9	2.9	4.0	0.0	8.7	3.5	6.9	0.6	1.7	2.3
30-39	114	15.8	18.4	24.6	8.8	6.1	0.9	1.8	3.5	4.4	0.9	4.4	5.3	3.5	0.9	0.0	0.9
40-49	134	13.4	18.7	25.4	13.4	6.7	0.7	6.0	7.5	1.5	0.0	0.7	3.7	0.7	0.7	0.7	0.0
50-59	186	15.1	23.7	27.4	20.4	1.6	0.0	3.2	3.2	0.0	0.0	1.6	1.1	0.5	0.0	0.0	2.2
60-64	162	26.5	22.8	26.5	17.3	0.6	0.6	1.2	1.2	0.0	0.0	1.2	1.2	0.0	0.6	0.0	0.0
65-69	171	22.8	19.3	29.8	19.9	0.0	0.0	1.8	1.2	0.0	0.0	0.0	1.8	1.2	0.0	0.0	2.3
70-74	173	16.8	23.7	33.5	20.2	0.0	0.0	1.2	0.6	0.0	0.0	0.6	1.2	0.0	0.6	0.0	1.7
75-79	156	20.5	19.9	35.9	20.5	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.9
80-97	179	17.9	32.4	26.3	20.7	0.0	0.6	0.0	0.6	0.0	0.6	0.0	0.6	0.0	0.0	0.0	0.6
Total	1,448																

Note. NE = Northeast; MW = Midwest; S = South; W = West.

Table 3.7
Number of Participants in the NAB Demographically Corrected Standardization Sample by Age, Sex, Education, and NAB Form

Age (years)	n	Female										Male																					
		≤11YE				12YE				13-15YE				≥16YE				≤11YE				12YE				13-15YE				≥16YE			
		F1		F2		F1		F2		F1		F2		F1		F2		F1		F2		F1		F2		F1		F2		F1		F2	
18-29	173	9	7	10	8	20	19	19	9	9	5	9	7	8	12	16	6	9															
30-39	114	7	6	4	3	10	4	13	10		7	8	8	3	7	6	7	11															
40-49	134	8	4	8	9	11	13	15	8		4	7	4	10	9	9	10	5															
50-59	186	13	7	14	9	15	13	14	17		10	11	10	10	9	11	12	11															
60-64	162	10	9	9	12	13	8	14	8		11	8	5	13	9	11	7	15															
65-69	171	8	11	13	10	7	16	12	9		9	11	11	12	10	10	12	10															
70-74	173	12	8	8	14	9	12	12	15		8	11	8	13	11	9	9	14															
75-79	156	6	12	7	13	6	15	10	10		9	9	8	9	11	9	11	11															
80-97	179	6	8	13	9	14	13	15	22		8	7	6	10	8	7	19	14															
Total	1,448																																

Note. YE = years of education; F1 = NAB Form 1; F2 = NAB Form 2.

Table 3.8
Demographic Characteristics (%) of the
U.S. Population and the NAB Age-Based,
U.S. Census-Matched Standardization Sample

Demographic variable	U.S. population (%)	NAB U.S. Census-matched sample (%)^a
Sex		
Female	51.1	51.7
Male	48.9	48.3
Race/Ethnicity		
Caucasian	72.9	76.9
African American	11.6	10.5
Hispanic	10.7	7.3
Other	4.8	5.3
Education		
≤ 11 years	21.2	19.2
12 years	30.5	28.7
13-15 years	25.8	27.1
≥ 16 years	22.4	25.1
Geographic region		
Northeast	18.9	25.2
Midwest	23.0	20.3
South	35.0	32.3
West	23.0	22.2

Note. U.S. population data are from the *Current Population Survey, March 2001* [Data file]. Washington, DC: U.S. Bureau of the Census.

^a*N* = 950.

Table 3.9
Percentages of the U.S. Population by Age, Race/Ethnicity, and Education

Age (years)	Caucasian (%)			African American (%)			Hispanic (%)			Other (%)						
	13-15YE ≥16YE			13-15YE ≥16YE			13-15YE ≥16YE			13-15YE ≥16YE						
	≤11YE	12YE	13-15YE	≤11YE	12YE	13-15YE	≤11YE	12YE	13-15YE	≤11YE	12YE	13-15YE				
18-29	8.5	19.1	24.7	12.5	3.3	4.8	4.6	1.4	6.2	4.7	3.7	0.9	0.7	1.1	2.1	1.8
30-39	4.5	20.9	19.7	23.0	1.4	5.0	3.9	2.4	5.3	3.9	2.6	1.6	0.4	1.2	1.4	2.7
40-49	4.8	24.2	21.7	23.1	1.6	4.7	3.7	1.9	3.8	2.6	1.8	1.2	0.6	1.4	0.9	1.9
50-59	6.2	25.7	21.5	24.3	2.2	3.6	2.7	1.6	3.6	2.1	1.4	1.0	0.7	1.0	0.8	1.6
60-64	11.4	30.2	17.7	18.9	3.5	3.1	2.0	1.3	4.4	2.0	0.9	0.7	0.9	1.2	0.5	1.5
65-69	16.1	30.2	17.3	16.1	4.1	2.6	1.4	1.2	4.2	1.6	0.9	0.4	1.2	1.0	0.6	1.0
70-74	19.7	30.0	17.1	15.7	3.9	2.6	1.0	1.1	3.5	1.3	0.6	0.3	1.0	0.8	0.4	1.0
75-79	21.2	33.7	16.9	11.9	4.5	1.9	0.7	0.5	3.3	1.2	0.3	0.4	1.3	0.7	0.4	0.9
80-97	28.9	29.9	15.0	12.0	4.9	1.7	0.4	0.5	3.3	0.7	0.3	0.2	1.1	0.7	0.2	0.2

Note. YE = years of education. U.S. population data are from the *Current Population Survey, March 2001* [Data file]. Washington, DC: U.S. Bureau of the Census.

Table 3.10
Percentages of the NAB Age-Based, U.S. Census-Matched Sample by Age, Race/Ethnicity, and Education

Age (years)	n	Caucasian (%)			African American (%)			Hispanic (%)			Other (%)						
		13-15YE ≥16YE			13-15YE ≥16YE			13-15YE ≥16YE			13-15YE ≥16YE						
		≤11YE	12YE	13-15YE	≤11YE	12YE	13-15YE	≤11YE	12YE	13-15YE	≤11YE	12YE	13-15YE				
18-29	130	7.7	13.1	13.1	9.2	2.3	4.6	10.0	3.1	3.8	3.1	11.5	3.1	0.8	2.3	8.5	3.8
30-39	100	12.0	11.0	13.0	27.0	6.0	4.0	2.0	2.0	4.0	2.0	6.0	5.0	0.0	0.0	2.0	4.0
40-49	110	5.5	20.9	20.0	18.2	9.1	4.5	5.5	6.4	0.9	0.0	4.5	1.8	1.8	0.0	0.0	0.9
50-59	110	8.2	21.8	21.8	26.4	3.6	2.7	5.5	1.8	2.7	0.9	0.0	0.0	0.0	0.0	1.8	2.7
60-64	100	13.0	34.0	23.0	19.0	3.0	1.0	1.0	1.0	1.0	0.0	3.0	0.0	0.0	0.0	0.0	1.0
65-69	100	16.0	32.0	19.0	19.0	2.0	2.0	0.0	1.0	0.0	1.0	2.0	0.0	0.0	1.0	3.0	2.0
70-74	100	22.0	31.0	18.0	19.0	0.0	2.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	3.0
75-79	100	23.0	33.0	19.0	20.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	2.0
80-97	100	23.0	30.0	21.0	21.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0
Total	950																

Note. YE = years of education.

Table 3.11
Percentages of the U.S. Population by Age, Sex, and Education

Age (years)	Female (%)				Male (%)			
	≤11YE	12YE	13-15YE	≥16YE	≤11 YE	12YE	13-15YE	≥16YE
18-29	10.4	15.7	16.5	7.1	8.3	14.0	18.5	9.4
30-39	6.0	16.4	12.4	14.5	5.6	14.6	15.2	15.2
40-49	5.6	16.2	13.3	14.2	5.3	16.7	14.7	14.0
50-59	6.0	14.0	12.7	15.6	6.7	18.4	13.6	12.9
60-64	9.2	15.0	9.3	12.9	11.0	21.4	11.8	9.5
65-69	12.2	15.0	9.7	10.6	13.4	20.5	10.5	8.2
70-74	13.0	12.3	8.1	10.5	15.1	22.4	11.0	7.5
75-79	12.6	13.2	7.0	8.4	17.8	24.3	11.4	5.4
80-97	15.0	10.8	5.7	6.9	23.3	22.1	10.2	6.1

Note. YE = years of education; U.S. population data are from the *Current Population Survey, March 2001* [Data file]. Washington, DC: U.S. Bureau of the Census.

Table 3.12
Percentages of the NAB Age-Based, U.S. Census-Matched Sample by Age, Sex, and Education

Age (years)	n	Female (%)				Male (%)			
		≤11YE	12YE	13-15YE	≥16YE	≤11YE	12YE	13-15YE	≥16YE
18-29	130	7.7	13.1	24.6	10.0	6.9	10.0	18.5	9.2
30-39	100	13.0	6.0	12.0	21.0	9.0	11.0	11.0	17.0
40-49	110	9.1	12.7	17.3	14.5	8.2	12.7	12.7	12.7
50-59	110	7.3	13.6	18.2	14.5	7.3	11.8	10.9	16.4
60-64	100	8.0	19.0	14.0	12.0	9.0	16.0	13.0	9.0
65-69	100	9.0	15.0	12.0	10.0	9.0	21.0	12.0	12.0
70-74	100	11.0	16.0	10.0	12.0	12.0	18.0	10.0	11.0
75-79	100	11.0	18.0	10.0	9.0	13.0	16.0	10.0	13.0
80-97	100	14.0	15.0	13.0	11.0	10.0	16.0	9.0	12.0
Total	950								

Note. YE = years of education.

Table 3.13
Percentages of the U.S. Population by Age, Sex, and Race/Ethnicity

Age (years)	Female (%)				Male (%)			
	Caucasian	African American	Hispanic	Other	Caucasian	African American	Hispanic	Other
18-29	32.6	6.5	7.9	2.9	32.2	7.6	7.6	2.8
30-39	33.9	5.8	6.8	2.7	34.1	6.9	6.6	3.0
40-49	36.9	5.5	4.7	2.2	37.0	6.4	4.7	2.6
50-59	38.1	4.5	3.8	1.9	39.6	5.6	4.3	2.1
60-64	36.5	4.1	3.8	1.9	41.6	5.8	4.1	2.0
65-69	38.4	4.1	3.1	1.8	41.4	5.1	4.1	2.0
70-74	37.0	3.0	2.5	1.5	45.5	5.6	3.2	1.8
75-79	34.3	3.0	1.9	1.8	49.4	4.6	3.2	1.6
80-97	32.7	3.0	1.7	0.9	53.2	4.5	2.8	1.2

Note. U.S. population data are from the *Current Population Survey, March 2001* [Data file]. Washington, DC: U.S. Bureau of the Census.

Table 3.14
Percentages of the NAB Age-Based, U.S. Census-Matched Sample by Age, Sex, and Race/Ethnicity

Age (years)	<i>n</i>	Female (%)				Male (%)			
		Caucasian	African American	Hispanic	Other	Caucasian	African American	Hispanic	Other
18-29	130	20.8	13.1	13.8	7.7	22.3	6.9	7.7	7.7
30-39	100	35.0	4.0	9.0	4.0	28.0	10.0	8.0	2.0
40-49	110	38.2	10.0	4.5	0.9	26.4	15.5	2.7	1.8
50-59	110	40.0	8.2	0.9	4.5	38.2	5.5	2.7	0.0
60-64	100	46.0	3.0	3.0	1.0	43.0	3.0	1.0	0.0
65-69	100	41.0	3.0	1.0	1.0	45.0	2.0	2.0	5.0
70-74	100	46.0	0.0	0.0	3.0	44.0	3.0	3.0	1.0
75-79	100	43.0	1.0	0.0	4.0	52.0	0.0	0.0	0.0
80-97	100	49.0	2.0	2.0	0.0	46.0	0.0	0.0	1.0
Total	950								

Table 3.15
Percentages of the U.S. Population by Age, Race/Ethnicity, and Geographic Region of the U.S.

Age (years)	Caucasian (%)				African American (%)				Hispanic (%)				Other (%)			
	NE	MW	S	W	NE	MW	S	W	NE	MW	S	W	NE	MW	S	W
18-29	12.3	18.2	20.8	13.5	2.2	2.5	8.0	1.3	1.9	1.3	5.3	7.0	0.8	0.8	1.2	2.9
30-39	14.4	18.3	21.8	13.7	2.5	2.1	7.1	1.0	1.9	1.1	4.7	5.8	1.0	0.8	1.1	2.9
40-49	15.4	19.8	24.3	14.4	1.8	2.2	6.5	1.3	1.4	0.6	3.4	4.0	0.7	0.6	1.0	2.6
50-59	15.9	19.9	26.7	15.2	1.7	2.1	5.6	0.8	1.2	0.6	2.9	3.4	0.6	0.5	0.7	2.3
60-64	15.6	20.2	28.8	13.6	1.9	1.7	5.4	0.9	1.5	0.4	3.0	3.0	0.5	0.4	0.8	2.2
65-69	15.6	19.6	30.5	14.1	1.6	1.4	5.6	0.7	1.2	0.4	2.9	2.7	0.6	0.3	0.4	2.4
70-74	18.2	19.5	29.5	15.2	1.5	1.9	4.7	0.4	0.9	0.3	2.2	2.2	0.3	0.4	0.5	2.0
75-79	18.0	21.1	29.2	15.5	1.3	1.5	4.0	0.9	0.7	0.2	2.2	2.1	0.5	0.4	0.5	2.1
80-97	19.7	21.8	27.2	17.1	1.4	1.5	4.1	0.5	0.7	0.2	1.7	1.9	0.2	0.2	0.3	1.5

Note. NE = Northeast; MW = Midwest; S = South; W = West; U.S. population data are from the *Current Population Survey, March 2001* [Data file]. Washington, DC: U.S. Bureau of the Census.

Table 3.16
Percentages of the NAB Age-Based, U.S. Census-Matched Sample by Age, Race/Ethnicity, and Geographic Region of the U.S.

Age (years)	n	Caucasian (%)				African American (%)				Hispanic (%)				Other (%)			
		NE	MW	S	W	NE	MW	S	W	NE	MW	S	W	NE	MW	S	W
18-29	130	6.2	13.1	17.7	6.2	4.6	2.3	9.2	3.8	5.4	0.0	11.5	4.6	9.2	0.8	2.3	3.1
30-39	100	15.0	17.0	22.0	9.0	7.0	1.0	2.0	4.0	5.0	1.0	5.0	6.0	4.0	1.0	0.0	1.0
40-49	110	14.5	15.5	22.7	11.8	8.2	0.9	7.3	9.1	1.8	0.0	0.9	4.5	0.9	0.9	0.9	0.0
50-59	110	18.2	19.1	23.6	17.3	2.7	0.0	5.5	5.5	0.0	0.0	2.7	0.9	0.9	0.0	0.0	3.6
60-64	100	28.0	21.0	27.0	13.0	1.0	1.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	1.0	0.0	0.0
65-69	100	22.0	19.0	26.0	19.0	0.0	0.0	3.0	2.0	0.0	0.0	0.0	3.0	2.0	0.0	0.0	4.0
70-74	100	21.0	24.0	29.0	16.0	0.0	0.0	2.0	1.0	0.0	0.0	1.0	2.0	0.0	1.0	0.0	3.0
75-79	100	25.0	20.0	33.0	17.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	3.0
80-97	100	23.0	23.0	30.0	19.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	1.0
Total	950																

Note. NE = Northeast; MW = Midwest; S = South; W = West.