

Creation and Use of the NEO Personality Inventory- $3^{\text{\tiny TM}}$ (NEO-PI- $3^{\text{\tiny TM}}$) and NEO Five-Factor Inventory- $3^{\text{\tiny TM}}$ (NEO-FFI- $3^{\text{\tiny TM}}$) Spanish Translations

Alicia Carrillo, BS



Executive Summary

It is estimated that 13.4% of U.S. residents speak Spanish at home (U.S. Census Bureau, 2018), and that number is growing. The NEO Personality Inventory-3 (NEO-PI-3; McCrae & Costa, 2010) Spanish Form S Item Booklet and the NEO Five-Factor Inventory-3 (NEO-FFI-3; McCrae & Costa, 2010) Spanish Form S Adult Item Booklet provide practitioners with comprehensive tools to assess personality traits and help Spanish-speaking individuals with clinical mental and personality disorders get the support, monitoring, and treatment that they need.

Personality Assessment: The 5 Factors

There has been growing support among researchers and psychologists for a Five-Factor model of personality, or the Big 5 (Terracciano & McCrae, 2006). This model describes five dimensions that encompass all aspects of personality, specifically Neuroticism (N), Extraversion (E), Openness to Experience (O), Conscientiousness (C), and Agreeableness (A).

Research of the Five-Factor Model has found that these dimensions are relatively stable throughout the lifespan, have a strong genetic basis, and can be indicative of a variety of important traits such as emotional well-being, academic and job performance, health-risk behavior, and certain psychiatric disorders such as schizophrenia and borderline personality disorder (Terracciano & McCrae, 2006). The NEO Personality Inventories (McCrae & Costa, 2010) offer various tools that assess and provide interpretation of these five domains. High or low scores on each domain provide insight into personality traits that may be problematic (see Table 1).

NEO Personality Inventory-3

The NEO Personality Inventory-3 (NEO-PI-3; McCrae & Costa, 2010) is a 240-item personality measure for individuals ages 12 and older. The NEO-PI-3 is constructed on a 5-point, Likert-type scale on which the individual endorses each statement as "Strongly Disagree," "Disagree," "Neutral," "Agree," or "Strongly Agree". The NEO-PI-3 also contains three validity questions. It takes most individuals approximately 30 to 40 minutes to complete.

Items on the NEO-PI-3 are designed to target the five domains of personality. Each domain features six facets (see Table 2), and eight statements target each facet. Facet scores are summed to assess the five domains. Additionally, the NEO-PI-3 can be used with supplemental materials that aid interpretation and communication of results. The NEO Problems in Living Checklist provides a comprehensive look at possible traits associated with high and low scores on each of the 30 facets, the Your NEO Summary provides respondents with an easy-to-comprehend summary of their results, and the NEO Style Graph Booklet assists in the interpretation of pairs of factor scores. Thus, the NEO-PI-3 provides clients with a wealth of detailed information regarding the specific characteristics of each personality domain.

NEO Five-Factor Inventory-3

The NEO Five-Factor Inventory-3 (NEO-FFI-3; McCrae & Costa, 2010), is a 60-item personality measure for individuals ages 12 and older. Like the NEO-PI-3, the NEO-FFI-3 is constructed on a 5-point, Likert-type scale on which the individual endorses each statement as "Strongly Disagree," "Disagree," "Neutral," "Agree," or "Strongly Agree". The NEO-FFI-3 also contains three validity questions. It takes most individuals just 5 to 10 minutes to complete.

The NEO-FFI-3 is an abbreviated measure specifically designed to target the five domains of personality, with 12 statements relating to each of the five domains. It can also be used with *Your NEO Summary* and the *NEO Style Graph Booklet* to aid interpretation and communication of results.

Table 1					
Summary of Potential Traits Indicated by High or Low NEO Domain Scores					

Domain	High score indicators	Low score indicators
Neuroticism (N)	Impulsivity, emotional instability, anxiety or depression	Lack of emotion, excessive self-restraint, failure to recognize problems
Extraversion (E)	Reckless, excitement-seeking, excessive self- disclosure, tendency to be socially dominating or controlling	Social isolation and inhibition, flat affect, reluctance to assert oneself, inactive and unsatisfying lifestyle
Openness to Experience (O)	Eccentric thinking, preoccupation with fantasy and daydreams, social nonconformity	Difficulty adapting to change, low tolerance or understanding of different lifestyles, lack of creativity or imagination
Conscientiousness (C)	Obsession with cleanliness, compulsive behavior, extreme morals and rigid self-discipline	Disregard for rules and responsibilities, personal and occupational aimlessness, inability to self-discipline
Agreeableness (A)	Difficulty standing up for oneself, inability to recognize that certain people should not be trusted, excessive generosity that is exploited by others	Cynicism, combative and exploitative behaviors, tendency to be rude or arrogant

Table 2 NEO-PI-3 Domains and Facets

Domains

N: Neuroticism

E: Extraversion

O: Openness

A: Agreeableness

C: Conscientiousness

Neuroticism (N) facets

N1: Anxiety

N2: Angry Hostility

N3: Depression

N4: Self-Consciousness

N5: Impulsiveness

N6: Vulnerability

Extraversion (E) facets

E1: Warmth

E2: Gregariousness

E3: Assertiveness

E4: Activity

E5: Excitement-Seeking

E6: Positive Emotions

Openness (O) facets

O1: Fantasy

O2: Aesthetics

03: Feelings

04: Actions

O5: Ideas

06: Values

Agreeableness (A) facets

A1: Trust

A2: Straightforwardness

A3: Altruism

A4: Compliance

A5: Modesty

A6: Tender-Mindedness

Conscientiousness (C) facets

C1: Competence

C2: Order

C3: Dutifulness

C4: Achievement Striving

C5: Self-Discipline

C6: Deliberation

Spanish Translation

Why Spanish?

Emotional and behavioral disorders do not discriminate between languages, so it is important that informative assessments break the language barrier. More than 41 million individuals in the United States primarily speak Spanish at home (U.S. Census Bureau, 2018)—and this number is growing. Despite this, research on personality disorders in Spanish-speaking individuals is relatively scarce. Five-Factor personality assessments, such as the NEO Personality Inventories, are designed specifically to identify personality-related problems including depression, anxiety, and borderline personality disorder (McCrae & Costa, 2010).

Terracciano and McCrae (2006) have found that the Five-Factor Model of personality can be applied cross-culturally with success, supporting the utilization of these measures with Spanish-speaking individuals. To provide research opportunities and serve this significant portion of the U.S. population, psychological assessments like the NEO must be offered in Spanish.

Research shows that mental health issues are a problem for Spanish-speakers in the U.S. According to the Centers for Disease Control and Prevention's (CDC) 2015 Youth Risk Behavior Survey, 35.3% of Hispanic high school students in the United States reported feeling sad and hopeless nearly every day for a long period of time (i.e., greater than two weeks), to the point that it interfered with their daily activities (2016). Spanish-speaking Americans were found to be more likely to be diagnosed with Borderline Personality Disorder than African American and European Americans, with higher rates specifically relating to intense anger, affective instability, and unstable relationships (Chavira et al., 2003). However, when compared with non-Hispanic White adults, Hispanics and other ethnic minorities significantly underuse mental health services (Chang et al., 2013).

The disparity between the diagnosis and treatment of Hispanic individuals in the U.S. could be due to several issues. Only 5.5% of psychologists in the U.S. are able to provide services in Spanish (American Psychological Association, 2016), so misdiagnosis due to lack of cultural or linguistic awareness is possible. Misdiagnoses can also be caused by the normal process of acculturation which can mimic symptoms of Borderline Personality Disorder, specifically unstable self-image, contradictory mental processes, poor emotional control, and unstable relationships (Chavira et al., 2003). Factors such as language barriers, lack of health insurance, and low income may also contribute to this disparity (Brach & Chevarley, 2008).

The NEO-PI-3 and NEO-FFI-3 Spanish item booklets can help to increase understanding and bridge the gap in mental health services for Spanish speakers in the U.S. These two forms were designed so clinicians who do not speak Spanish can easily score and interpret results.

Translation Process

The items on both the NEO-PI-3 Form S Item Booklet and the NEO-FFI-3 Form S Adult Item Booklet were translated into Spanish, specifically Spanish for the U.S. Items were then back-translated into English by an individual unfamiliar with the English versions of

the tests. This back-translation was reviewed by PAR staff to ensure that translated items matched the purpose and intent of the items on the original measures. Items were also thoroughly reviewed by a professional Spanish-speaking copy editor.

Both the NEO-PI-3 Spanish Form S Answer Sheet and the NEO-FFI-3 Spanish Form S Adult Item Booklet are printed on carbonless paper with the scoring sheets underneath. The underlying scoring sheets have not been translated into Spanish. Additionally, these measures can be used with the original NEO Problems in Living Checklist, Your NEO Summary, and the NEO Style Graph Booklet, which have not been altered or translated in any way. This allows clinicians who do not speak Spanish to easily score and interpret these instruments. However, it is recommended that a Spanish-speaking bilingual examiner administer the scales, if possible, to answer any questions or concerns that may arise.

Using the NEO-PI-3 and NEO-FFI-3 Spanish Forms

To increase ecological validity, the publisher recommends using an acculturation measure prior to administration of any measure in Spanish. PAR's Language Acculturation Meter (LAM; Trujillo et al., 2020) is a free resource available in both English and Spanish. The LAM documents an individual's background information and prior educational history and includes 17 items that measure language usage and English comprehension. Use of the LAM can open a dialogue that will increase a clinician's cultural awareness of the individual being evaluated and provide valuable background information to consider when making decisions regarding further assessment.

To increase ecological validity, administer our <u>Language</u> <u>Acculturation Meter</u> prior to testing.

The NEO-PI-3

Administration

Administration of the NEO-Pl-3 Spanish Form S Item Booklet is identical to administration in English, as detailed in the NEO Inventories Professional Manual (McCrae & Costa, 2010). It is recommended that a bilingual Spanish-speaking examiner administer the instrument to establish rapport and answer any questions or if the individual is unable to read the items due to reading or visual acuity deficits. However, as with the English instrument, the NEO-Pl-3 Spanish Form S Item Booklet can be completed without the presence of an examiner, if necessary.

Missing items may be scored as a "Neutral" response. However, if there are 41 or more missing items, or if the validity questions are endorsed as "Disagree" or "Strongly Disagree" (for Item A) or "No" (for Items B and C), the booklet should be invalidated or investigated.

Scoring

The NEO-Pl-3 Spanish Form S Item Booklet is scored exactly like the English version, as explained in the NEO Inventories Professional Manual (McCrae & Costa, 2010). The bottom page of the answer sheet and the NEO supplemental materials (*Your NEO Summary*, the *NEO Style Graph Booklet*, and the *NEO Problems in Living Checklist*) were not translated into Spanish, allowing clinicians who do not speak Spanish to easily score and interpret the instrument. In addition to traditional hand scoring, NEO-Pl-3 Spanish Form S Item Booklet scores can be hand-entered into <u>PARiConnect</u>, which then generates a score, summary, or interpretive report. This method is reliable, easy to use, reduces scoring and report-writing time, and protects each client's identity.

To hand score the completed carbonless NEO-Pl-3 Spanish Form S Item Booklet, the examiner should first tear at the perforation at the top of the answer sheet and peel back the front page. The bottom page will reveal circled item scores (ranging from 0 to 4) for each item. Add the scores across each row and enter the value in the empty space to the right of the row. Each row is associated with one of the 30 facets. For example, the sum of the scores on the first row of the answer sheet comprise the facet raw score for N1, the sum of the scores for the second row comprise the facet raw score for E1, and so on. Once you have summed across the rows and have values for each of the 30 facets, add the facet scores for each letter (N1-N6, E1-E6, O1-O6, A1-A6, C1-C6) to obtain the domain raw score. Then enter each value in the appropriate box in the Domain Raw Score table at the bottom of the answer sheet.

Results may be presented on a Profile Form to determine standard scores. (Note: There are separate profile forms for different age ranges and different sexes—the NEO-Pl-3 Form S Adult Profile form should be used with individuals ages 21 years and older; the NEO-Pl-3 Form S Adolescent Profile form should be used with individuals ages 12-20 years). Transfer raw scores from the answer sheet to the appropriate spaces at the bottom of the appropriate Profile Form. Additionally, transfer the facet scores (i.e., N1-N6, E1-E6, O1-O6, etc.), to the

appropriate spaces at the bottom of the Profile Form. Add the scores for the facets of each domain and write the sum in the space labeled "Total." Compare this score to the Total score in the Domain Raw Score table. If these scores do not match, an error in addition or transcription has occurred.

Once the accuracy for each score has been confirmed, locate the column for each domain and find the number that corresponds with the domain raw score to find the *T* score and mark it with an X. Write these scores at the top of the profile and use them in *Your NEO Summary*, the *NEO Style Graph Booklet*, and the *NEO Problems in Living Checklist*. Clinicians should exercise caution and professional judgment during interpretation, as normative scores were generated using the English version of the NEO-PI-3.

The NEO-FFI-3

Administration

Administration of the NEO-FFI-3 Spanish Form S Adult Item Booklet is identical to administration in English, as detailed in the NEO Inventories Professional Manual (McCrae & Costa, 2010). Please note, however, that only the Adult item booklet—and not the Adolescent item booklet—was translated into Spanish. It is recommended that a bilingual Spanish-speaking examiner administer the instrument in order to establish rapport and answer any questions that may arise. However, as with the English instrument, the NEO-FFI-3 Spanish Form S Adult Item Booklet can be completed without the presence of an examiner, if necessary.

Missing items may be scored as a "Neutral" response. However, if there are 10 or more missing items on the form, or if any of the validity questions are endorsed as "No," it should be invalidated.

Scoring

The NEO-FFI-3 Spanish Form S Adult Item Booklet is scored exactly like the English version, as detailed in the NEO Inventories Professional Manual (McCrae & Costa, 2010). The bottom page of the item booklet and the NEO

supplemental materials (*Your NEO Summary* and the *NEO Style Graph Booklet*) have not been translated, allowing clinicians who do not speak Spanish to easily score and interpret the instrument. In addition to traditional hand scoring, NEO-FFI-3 Spanish Form S Adult Item Booklet scores can be hand-entered into <u>PARiConnect</u>, which then generates a score, summary, or interpretive report. This method is reliable, easy to use, reduces scoring and report-writing time, and protects each client's identity.

To hand score the two-part carbonless NEO-FFI-3 Spanish Form S Adult Item Booklet, the examiner should first tear the perforation at the top of the answer sheet and peel back the front page. The bottom page will reveal shaded item scores (ranging from 0 to 4) for each item. Add the scores down the column to get the raw score for each of the five domains. Transfer each domain score to the appropriate profile table. Find the number that corresponds to each raw score and mark it with an X to find the T score. These T scores can be used with Your NEO Summary or the NEO Style Graph Booklet. Clinicians should exercise caution and professional judgment during interpretation, as normative scores were generated using the English version of the NEO-FFI-3.

Summary

Five-factor personality measures, such as the NEO-PI-3 Spanish Form S Answer Sheet and the NEO-FFI-3 Spanish Form S Adult Item Booklet, can provide individuals with valuable information about themselves. These measures can uncover problematic tendencies and help diagnose a wide array of clinical problems. The over 41 million individuals in the United States who primarily speak Spanish at home (U.S. Census Bureau, 2018), may encounter language, social, and economic barriers that prevent them from receiving the mental health support they need. It is the intent of the authors and the publisher—through the development of the NEO-PI-3 Spanish Form S Answer Sheet and the NEO-FFI-3 Spanish Form S Adult Item Booklet—to provide clinicians with valuable tools that provide research opportunities and help serve the Spanishspeaking U.S. population.

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PAR Alicia Carrillo, BS Research Assistant acarrillo@parinc.com 1.800.331.8378

Alicia Carrillo is a Research Assistant in the Research and Development department at PAR. In her role, she designs and manages project datasets; performs statistical analyses to ensure reliable and valid data; assists in the development of white papers, training materials, and presentations; and performs quality checks of data and editorial reviews of product components. She is also the Education Director for Theatre eXceptional, which provides performance opportunities for adults with disabilities. She holds a bachelor's degree in psychology from the University of Tampa.

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A comprehensive reference list of research articles related to the NEO is available at https://www.mendeley.com/community/neo-personality-inventory/. After accessing the link, you will be prompted to create an account with Mendeley, a free reference management tool, to view the NEO reference list. A bibliography from the NEO Inventories manual is also available under the Resources tab at https://www.parinc.com/NEOPI3.

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