

Which Assertiveness Competencies Count Most? Assessing Assertiveness, Passiveness, and Aggressiveness With a New Online Questionnaire

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Abstract

Data collected online from a convenience sample of 16,033 people from 83 countries were analyzed to determine (a) which of four empirically-derived assertiveness competencies – Communicating Proactively, Expressing Your Needs and Desires, Standing Up for Yourself, and Presenting Yourself Confidently – best predicted four self-reported positive life outcomes and (b) how well those life outcomes were predicted by measures of assertiveness, passiveness, and aggressiveness. Regression analyses showed that the competency “Presenting Yourself Confidently” was the best predictor of life outcomes. Assertiveness was positively correlated with those outcomes; passiveness was negatively correlated with them; and the relationship between aggressiveness and those outcomes was orderly and complex, suggesting that aggressiveness has both benefits and costs. Our results also confirmed the value of assertiveness training.

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Data Availability Statement included at the end of the article

Keywords

Assertiveness competencies, assertiveness skills, EACI, Epstein assertiveness competencies inventory, online psychological tests

Introduction

The Five-Factor Model of personality traits is one of the most influential models in psychology, and the Extraversion factor is defined in part by assertiveness (Costa & McCrae, 1992; Goldberg, 1993; Hu et al., 2019). The value that assertiveness has shown in both professional and personal situations (Ames, 2008; Cantero-Sánchez et al., 2021; Couture et al., 2022; Renger et al., 2019) has inspired the creation of dozens of assertiveness training programs since the 1970s (Alberti & Emmons, 2017; Gambrill & Richey, 1975; Gay et al., 1975; Jakubowski-Spector, 1973; Lee & Crockett, 1994; Mays, 1987; Paterson, 2000; Rashbaum-Selig, 1976; Shimizu et al., 2004; Ustun & Kucuk, 2020). With both children and adults and in a variety of settings, assertiveness training has been credited with producing a number of positive outcomes, among them: increased self-esteem (Golshiri et al., 2023; Temple & Robson, 1991), improved decision making (Rashbaum-Selig, 1976; Widman et al., 2018) and confidence (Rashbaum-Selig, 1976; Trihadi et al., 2017), reduced anxiety and stress (Lee & Crockett, 1994; Lin et al., 2008; Masoud et al., 2021; Mohammadpour et al., 2018), and improved social functioning (Cantero-Sánchez et al., 2021; Lin et al., 2008).

Assertiveness is a set of communication skills that allow people to express their needs and feelings without harming others (cf. Alberti & Emmons, 2017; Bishop, 2010; Chan & Rowe, 2014; Jakubowski-Spector, 1973; Shimizu et al., 2004). It can be considered the advantageous middle ground between passiveness (or “passivity”) and aggressiveness. People who are passive often fail to express their needs, and hence their needs often don’t get met; people who are aggressive often express their needs by running roughshod over the needs or feelings of others (Bishop, 2010). Being too passive or too aggressive can impact interpersonal relationships and personal well-being adversely, sometimes limiting people’s chances for success in both their personal and professional lives (Ames & Flynn, 2007; Chan, 1993; Cianni & Horan, 1990; Darjan et al., 2020; Shimizu et al., 2004; Watanabe, 2010).

We are unaware of any negative reports about assertiveness, but, at first glance, a paper published by Ames and Flynn (2007) appears to cast doubt on its value in the business setting, suggesting that both very low and very high levels of assertiveness among business leaders are viewed negatively by colleagues, or, more specifically, that the relationship between perceived levels of assertiveness and the perceived effectiveness of leaders is curvilinear. There are several aspects of this report, however, that make it difficult to interpret for present purposes. First of all, all of the subjects in the three studies described in the paper (a total of 769 people, 70% of whom were male) were students at the same East Coast university and may even have been students in classes taught by the investigators; the authors are not clear on this point, but they don’t

rule out this possibility. Second, even setting aside concerns about the homogeneity of the sample, as far as we can tell, no attempts were made by the investigators to control for possible expectancy effects. Had these students been exposed to any material in their courses that might have caused them to perceive high or low levels of assertiveness negatively? Third, the authors' conclusions were based entirely on one type of datum, namely, their finding that the word "assertive" was mentioned more frequently in comments about the weaknesses of leaders than in comments about the strengths of leaders (see [Ames & Flynn, 2007](#), p. 312). From word counts, the authors made inferences about their subjects' perceptions of assertiveness, but they never asked their subjects directly to rate the importance or value of assertiveness. Apart from that one study, which we consider to be flawed, we are unaware of any study that casts doubt upon the value of assertiveness.

The Nature and Value of a Competencies Approach

The present study was conducted in the spirit of decades of research that has, with varying degrees of success, broken down important human abilities that were once believed to be innate traits into sets of measurable and trainable competencies. David McClelland's early research on leadership (e.g., [McClelland, 1973](#)) helped set this trend in motion (cf. [Briscoe & Hall, 1999](#); [Deming, 1982](#); [Quinn et al., 1990](#)), and this approach has proved to be valuable in education (e.g., [Warn & Tranter, 2001](#)), business (e.g., [Epstein, Kaminaka, et al., 2013](#); [Shippmann et al., 2000](#); [Spencer & Spencer, 1993](#)), healthcare (e.g., [Marrelli et al., 2005](#)), and other areas in which human performance is important (e.g., [Epstein et al., 2008, 2013b, 2016, 2022a, 2022b, 2023, 2024](#); [Epstein & Phan, 2012](#)). Unlike instruments that measure personality traits, the competencies approach to human performance avoids labeling or stereotyping people ([Steele & Aronson, 1995](#); [Steele et al., 2002](#)), and because people's competencies can almost always be improved, it gives people hope ([Markus et al., 2005](#)).

Assertiveness Competencies

The competencies (or "components" or "factors") underlying assertiveness have been characterized in different ways by different authors. For example, [Henderson and Furnham \(1983\)](#) conducted a factor analysis to evaluate five different assertiveness inventories, concluding, among other things, that two major factors are essential to assertiveness: Standing up for Personal Rights in a Public Situation, and Initiating Interaction with Nonintimate Others. [Watanabe \(2010\)](#) examined four components of assertiveness with a group of high school students, concluding that an optimal value of a component she called "self-direction" (defined roughly as the ability to make decisions for oneself without being directed by others) had the greatest benefits.

An early study by [Nevid and Rathus \(1979\)](#) used a factor analysis to identify components emerging from the Rathus Assertiveness Scale (for information about the original scale, see [Rathus \(1973\)](#)). The authors performed separate analyses for males

and females – in all, 1401 college students from “all regions of the United States” (p. 21) – identifying eight factors for males and nine for females. Major factors emerging for both genders included: Assertive Business Dealings, Complaining to Rectify Injustice, Insensitive Self-Expressiveness, Spontaneity, and Verbal Fluency. The gender-specific factors identified in this study suggest that it was very much a product of its era. For women, the key factors were: General Argumentativeness and Arguing over Prices. For men, the key factors were: Combativeness, Control over Arousal During Confrontations, and Self-Aggrandizement. The authors acknowledge that such factors might reflect “sex-role stereotyping” (Nevid & Rathus, 1979, p. 21).

The best-selling assertiveness book of all time, *Your Perfect Right*, by clinical psychologists Robert E. Alberti and Michael L. Emmons – first published in 1970 and released in its 10th edition in 2017 (Alberti & Emmons, 2017) – breaks down assertiveness into 11 “key qualities” (pp. 59–60). These are: (1) self-expression, (2) respect for the rights of others, (3) honesty, (4) being direct and firm, (5) equalizing the benefits of both parties in a relationship, (6) “being both verbal and nonverbal” (p. 59), (7) “being positive at times and negative at times” (p. 60), (8) being appropriate for the person and situation, (9) being socially responsible, (10) using both inborn and learned styles of behavior, and (11) being “as persistent as is necessary to achieve one’s goals without violating the ten points above” (p. 60). Unfortunately, the authors present no empirical evidence to support the validity of this taxonomy. The authors also distinguish assertive behavior from both nonassertive behavior (which we call “passive” behavior or “passiveness” in the present essay) and aggressive behavior, arguing for the advantages of assertiveness over both of these alternatives, although, once again, no supporting data are presented.

Tests of Assertiveness

A number of tests have been developed over the years to measure assertiveness, either as a personality trait or as a skill set (Carlson et al., 2017, 2021; Jardim et al., 2020). Dozens – perhaps even hundreds – of nonvalidated tests of this sort have been posted at websites such as [buzzfeed.com](https://www.buzzfeed.com), [playbuzz.com](https://www.playbuzz.com), [okcupid.com](https://www.okcupid.com), [123test.com](https://www.123test.com), and [rumandmonkey.com](https://www.rumandmonkey.com),¹ and, since anyone can post such a test, the number of nonvalidated tests will presumably continue to grow as long as the internet exists. Buzzfeed, a popular news site, even has a link at the top of its home page reading “Make a Quiz.” Because more and more people are now going first to the internet to get information about health and mental health (Kalckreuth et al., 2014; Powell & Clarke, 2006; Pretorius et al., 2019), the rapid proliferation of nonvalidated tests is a serious problem that has no obvious solution. Even when validated tests exist online, users have no obvious way of knowing which tests are validated and which are not – and, of course, why validation is important.

One online assertiveness test, posted at [psychtests.com](https://www.psychtests.com), claims to be “scientifically validated,” but only minimal psychometric properties are provided (no validity evidence is presented, for example; see American Educational Research Association, 2014), and if a validation study had indeed been conducted at some point, it was never

published, as far as we can tell (see testyourself.psychtests.com/staticid/973). Even the 35-item Assertiveness Inventory included in the Alberti and Emmons (2017) book appears never to have been evaluated in any way.

Do validated tests of assertiveness exist? Looking at all editions of the *Mental Measurements Yearbook* (MMY) that have been published since 1938 and that are listed in EBSCO's MMY database,² we found 36 validated tests that measure assertiveness as one of a group of personality traits, but not a single validated test that focuses on assertiveness exclusively. For example, the Emergenetics Profile (Carlson et al., 2017) measures assertiveness along with two other behavioral attributes, expressiveness and flexibility; it also measures four "thinking preferences." The EBSCO database also includes 20 tests that measure one or more skills associated with assertiveness, but those skills are measured alongside other non-assertiveness-related skills, or even alongside various personality traits. For example, the Communication Skills Assessment (Carlson et al., 2014) looks at five areas of functioning, defined as involving both personality traits and skill sets, labeled as follows: Assertiveness (defined, quite narrowly, as the ability to express differing opinions), Insightfulness (defined as the ability to see other points of view), Verbal Expression (defined as the ability to deliver a clear message), Listening Skills (defined as the ability to actively listen), and Emotional Management (defined as the ability to deal with self and other's emotions).

The most recent edition of the MMY (Carlson et al., 2021) includes similar tests, but, once again, none that focus exclusively on assertiveness. Since that edition of the MMY was published, we did find one validated test of "sexual assertiveness" published in a peer-reviewed journal (Couture et al., 2022); it is relevant to one domain of behavior (sexual), and it does not use a competencies approach. As far as we can tell at this writing, no validated test of assertiveness competencies has ever been published. With more people relying now on the internet as a major resource for self-evaluation (Alhusseini et al., 2020; Davis, 2022; Fox & Duggan, 2013; Rutten et al., 2019), our effort to develop a free, validated, and widely available instrument for measuring assertiveness competencies online is all the more important, or at least of practical value.

The specific objectives of the present study were (a) to describe how we developed a new online questionnaire that measures four behavioral competencies associated with assertiveness, (b) to analyze data obtained from a large sample of people who completed the new questionnaire, (c) to rank order the assertiveness competencies according to how well they predicted desirable, self-reported life outcomes, (d) to compare the relative effectiveness of assertiveness, passiveness, and aggressiveness, (e) to evaluate the test's reliability, and (f) to present evidence of its validity.

Methods

Ethics Statement

The federally registered Institutional Review Board (IRB) of the sponsoring institution (American Institute for Behavioral Research and Technology) approved this study

(protocol number 11015) with exempt status and a waiver of the requirement for informed consent under the US Department of Health and Human Services (HHS) regulations (45 CFR 46.116(d), 45 CFR 46.117(c) (2), and 45 CFR 46.111) because (a) the anonymity of participants was preserved and (b) the risk to participants was minimal. The IRB is registered with the Office for Human Research Protections (OHRP) under number IRB00009303, and the Federalwide Assurance number for the IRB is FWA00021545.

Participants

Before data cleaning, our dataset included 18,638 people who had completed the Epstein Assertiveness Competencies Inventory (EACI) between December 22, 2013 and March 18, 2024. Adhering to methodology researchers have employed in similar studies (e.g., Epstein et al., 2008; Epstein, Ho, et al., 2022, 2024; Epstein & Phan, 2012), if someone completed the questionnaire more than once on the same day, we preserved only the first instance in which more than half the questionnaire items were answered. We also removed all cases in which self-reported English fluency was below 6 (on a scale from 1 to 10, where 10 indicated the highest level of fluency). After cleaning, 16,033 participants remained in the dataset.

The self-reported demographic characteristics of the participants were as follows: Age ranged from 10 to 95 ($M = 25.30$ [$SD = 10.65$]). Because the EACI has a Flesch-Kincaid reading level of 5.0, and because most 10-year-old children in the US have completed the fifth grade, we received Institutional Review Board (IRB) approval for participants age 10 and over.

Overall, 8,880 (55.4%) of our participants identified themselves as female, 6,158 (38.4%) as male, and 313 (2.0%) as other. Racial and ethnic background was as follows: 110 (0.7%) of our participants identified themselves as American Indian, 2,975 (18.6%) as Asian, 1,302 (8.1%) as Black, 1,128 (7.0%) as Hispanic, 8,741 (54.5%) as White, and 1,130 (7.0%) as Other; 647 individuals (4.0%) did not answer this question. Overall, 45.5% of the individuals in the sample identified themselves as non-White.

Regarding level of education completed: 1,222 (7.6%) reported not having a high school degree; 6,470 (40.4%) reported completing high school; 1,884 (11.8%) reported having an associate's degree; 4,078 (25.4%) reported having completed college; 1,771 (11.0%) reported having a master's degree; 274 (1.7%) reported having a doctoral degree; and 334 (2.1%) did not answer the question. Regarding sexual orientation: 11,659 (72.7%) identified themselves as straight; 658 (4.1%) as gay or lesbian; 1,489 (9.3%) as bisexual; 524 (3.3%) as other, and 815 (5.1%) did not answer this question. Regarding country of origin: 9,243 (57.7%) were from the United States and Canada, and 6790 (42.3%) were from 81 other countries.

Study Design

To evaluate the new questionnaire, we employed a “concurrent study design” as described in Standards for Educational and Psychological Testing (American

Educational Research Association, 2014), prepared jointly by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education. Specifically, we sought to measure the strength of the relationships between our questionnaire scores and the scores on our self-reported criterion questions. This design is called “concurrent” because we obtained questionnaire scores and criterion measures at the same time, a strategy that avoids possible temporal confounds. Results from studies employing this design are considered especially robust when the pattern of relationships between questionnaire scores and criterion measures proves to be consistent across different demographic groups.

Test Construction

The EACI was constructed by using a series of 42 multiple-choice questions to measure four aspects of assertiveness that have been discussed and evaluated in a variety of empirical and theoretical papers and books since the 1970s. Each question had the same structure. First, a situation was briefly described in which one might behave in different ways. Below that description, people were shown three different ways in which they might respond – either passively, assertively, or aggressively.

Those three possible responses were presented in a random order. In Item 1 – an actual item from the online questionnaire – the first possible answer was passive, the second was assertive, and the third was aggressive:

- (1) When someone speaks to me:
 - a __ I usually try to accept everything he or she is saying.
 - b __ I listen carefully and then express my own thoughts on the matter.
 - c __ I frequently interrupt him or her.

The 42 questionnaire items were inspired by the empirical literature we reviewed in the months just prior to its posting online. For example, Item 33 (“When it comes to initiating contact with people I don’t know...”) and Item 5 (“When I have something relevant to add to a conversation...”) were inspired by a study of the components of assertiveness by Chan (1993). In that study, the author concluded, “assertive behavior deficits may lie less in achievement-related confronting responses, but more in expressing and disclosing responses, and perhaps in requests for changes in behaviors, and these classes of responses should be carefully addressed in training” (Chan, 1993, p. 536). Item 6 (“When I’m around people I want to impress...”) and Item 29 (“When I receive a complement...”) were inspired by a study of cognition in assertiveness by Vagos and Pereira (2010). In that study, the authors stated, “Cognition in assertiveness is associated with three main aspects: representations about the self, others, and the relationships among them” (p. 661).

In a study about the differences between assertive and aggressive behavior, the author noted that in the face of conflict, “assertive responses provide stimulus cues

which may evoke desired compliance responses learned through previous social experiences. Therefore, a punitive or aggressive response would involve rejection and ridicule, disparagement, or other forms of negative evaluation. A nonpunitive or assertive response would be nonjudgmental and acceptant of the other persons needs and feelings” (Hollandsworth, 1977, p. 350). This article inspired items such as Item 17 (When I’m arguing with someone...) and Item 11 (When it comes to my nationality, race, ethnicity, or religion...).

Table 1 shows the four competencies, the items corresponding to each competency, and relevant references.

Procedure

The EACI was first posted online at <https://HowAssertiveAreYou.com> in 2011. We made no effort to recruit people to complete the questionnaire. Thus, the group of people who ultimately did so should be considered a convenience sample (see Discussion).

Participants were first given some basic instructions about the questionnaire and how to complete it (see Text S1 in Supplemental Materials). They were then asked a series of demographic questions, along with five criterion questions (Figure S2); as noted above, these are questions the answer to which we believed should be predictable from scores on the questionnaire (American Educational Research Association, 2014; Groth-Marnat & Wright, 2016; Noel & Asmundson, 2022). The participants were shown the 42 questionnaire items (Table 1). When they completed the questionnaire, they could click “Submit” to receive their results. They were shown their results in both a numeric and custom pie-chart form and given a brief textual commentary on their results (see Figure S1). They were also given basic information about assertiveness, passiveness, and aggressiveness and were shown pie-charts exemplifying five different assertiveness styles, as shown in Figure 1. We also reminded participants about the advantages of assertiveness in most situations (Text S2).

We labeled these five styles high-assertive, high-passive, high-aggressive, passive-aggressive, and situational. The first three are, we believe, self-explanatory. The “passive-aggressive” style has been discussed at length by other authors since at least the early 1900s (e.g., Cole, 1984; Johnson & Klee, 2007; Mkhitarian, 2024; Rabkin, 1965), and the final style – situational – implies that someone might behave in an assertive, passive, or aggressive manner, as the situation demands (Eisler et al., 1981a, 1981b; Kirschner & Galassi, 1983).

Results

Reliability and Validity

Internal consistency reliability was assessed using Cronbach’s Alpha, which proved to be relatively high: 0.87. Because our data were collected online, and because we were

Table 1. Four Assertiveness Competencies.

1. Communicating Proactively: The ability to initiate, build, and maintain rapport with others while effectively listening and learning from them.

Relevant items (11):

1. When someone speaks to me: a__I usually try to accept everything he or she is saying. b__I listen carefully and then express my own thoughts on the matter. c__I frequently interrupt him or her.
3. When I don't understand what someone is saying: a__I pretend to understand. b__I ask him or her to clarify. c__I might insult him or her and demand clearer language.
5. When I have something relevant to add to a conversation: a__I keep it to myself. b__I speak up at the first opportunity. c__I will typically interrupt.
7. When I don't understand a word someone uses: a__I usually pretend I understand. b__I ask him or her to define it. c__I might ridicule him or her and demand simpler language.
9. When using social media like Facebook: a__I never post anything. b__I post from time to time when I have something that I think others will find interesting. c__I post almost everything I do.
16. When I'm not sure someone has understood what I said: a__I usually pretend not to notice his or her confusion. b__I usually rephrase what I said. c__I berate him or her for not getting it.
21. If I'm not sure someone has heard me: a__I pretend I hadn't said anything. b__I calmly repeat myself. c__I might berate him or her for not listening to me.
28. When it comes to email: a__I check my email as little as possible. b__I actively check and use my email to stay in touch with people. c__I often use my email to express my anger.
33. When it comes to initiating contact with people I don't know: a__I usually don't. b__I do so fairly easily. c__I may interrupt someone's conversation to introduce myself.
37. When I have a question: a__I'm often too afraid to ask. b__I generally ask it, even if it seems dumb. c__I generally insist that people answer it quickly and to my complete satisfaction.
42. Regarding people who are important in my life: a__I usually have trouble keeping in touch. b__I generally make a reasonable effort to keep in touch. c__I sometimes berate them if they don't keep in touch.

References: Ames & Flynn (2007); Arrindell et al., 1990a, 1990b; Chan (1993); Gambrill & Richey (1975); Gay et al. (1975); Henderson & Furnham (1983); Hollandsworth (1977); Shatz (1983); Speed et al. (2018); Vagos & Pereira (2010); Watanabe (2010).

2. Expressing Your Needs and Desires: The ability to effectively communicate one's feelings, both positive and negative; to communicate one's needs without offending others; and knowing how to ask others for assistance.

Relevant items (10):

2. When I need to ask a favor of someone: a__I mainly just hint around and hope he or she will get it. b__I usually ask for the favor clearly and directly. c__I will find a way to get him or her to help me, no matter what it takes.
12. If I can't do something on my own: a__I usually just give up. b__I ask for help. c__I might take out my frustration on whoever is nearby.
15. When I'm unhappy in a relationship: a__I usually say nothing. b__I let my partner know and try to improve things. c__I tend to blame my partner.

(continued)

Table 1. (continued)

2. *Expressing Your Needs and Desires:* The ability to effectively communicate one's feelings, both positive and negative; to communicate one's needs without offending others; and knowing how to ask others for assistance.

20. When going out to eat with a friend: a__I usually let him or her choose the restaurant. b__I have no trouble suggesting a restaurant. c__I always know the best places to eat.
24. If my needs are not met during sex: a__I usually keep it to myself. b__I usually explain the problem calmly to my partner. c__I sometimes go completely berserk.
26. When I feel love for someone: a__It usually stays a secret. b__I usually let him or her know. c__I usually let him or her know that he or she belongs to me.
30. If I need something while sitting in a restaurant: a__I usually wait until my server makes his or her rounds. b__I usually ask the nearest server. c__I generally do whatever I have to do to get someone's attention.
32. When I am shopping and feel an item is overpriced: a__I generally pay the listed price. b__I generally ask for a discount. c__I usually insist on getting a discount.
34. When asking people out on dates: a__I usually don't ask. b__I'm usually pretty confident about asking someone out. c__I sometimes continue asking even after I've been rejected.
38. When someone asks me to do something I don't want to do: a__I usually just do it. b__I generally say "No," firmly but calmly. c__I usually make damn sure he or she won't ask me again.

References: Ames & Flynn (2007); Arrindell et al. (1990a, 1990b); Chan (1993); Cooley (1979); Gambrill & Richey (1975); Gay et al. (1975); Henderson & Furnham (1983); Hollandsworth (1977); Paterson (2000); Shatz (1983); Speed et al. (2018); Vagos & Pereira (2010); Watanabe (2010).

3. *Presenting Yourself Confidently:* The ability to appear confident, be decisive, think positively, and effectively manage anger and emotions.

Relevant items (11):

4. When speaking with someone: a__I have trouble making eye contact. b__I maintain good eye contact. c__I sometimes stare or move in close to make him or her uncomfortable.
6. When I'm around people I want to impress: a__I dress as I normally do and try not to stand out. b__I dress professionally and appropriately. c__I usually wear something bold and unique that will make me stand out.
8. When it comes to taking risks: a__I tend to play it safe. b__I take risks when they seem reasonable and appropriate. c__I love the rush of taking risks.
10. When I feel like I'm losing control: a__I stay away from other people. b__I know ways to calm myself down. c__It's best to stay out of my way.
14. To keep myself positive: a__I have trouble staying positive. b__I use positive self-talk, affirmations, or other means to try to stay positive. c__I'm always positive because I know I'm the best.
18. When someone asks about my accomplishments, a__I usually say very little. b__I share them confidently. c__I might talk his or her ear off.
22. When I need to make a decision: a__I often feel overwhelmed and don't act. b__I quickly weigh my options, then decide. c__I often go with whatever decision pops into my head, even if it's risky.
23. When I'm facing a challenge: a__I tend to think about all the things that could go wrong. b__I try to imagine myself succeeding. c__I'll typically do whatever it takes to succeed.

(continued)

Table 1. (continued)

3. *Presenting Yourself Confidently*: The ability to appear confident, be decisive, think positively, and effectively manage anger and emotions.

27. When speaking: a__I tend to speak quietly, and sometimes people can't hear me. b__I always try to speak loudly enough so people can hear me easily. c__I often feel the need to speak very loudly or shout to make sure I'm heard.

29. When I receive a compliment: a__I generally turn away or blush. b__I usually smile and say thank you. c__I usually tell people how good I'm doing before they tell me.

40. When it comes to my posture: a__I often tend to slouch. b__I generally maintain good posture. c__I generally maintain good posture and criticize those who do not.

References: Ames & Flynn (2007); Arrindell et al. (1990a, 1990b); Cianni & Horan (1990); Gay et al. (1975); Paterson (2000); Schwartz & Gottman (1976); Shatz (1983); Speed et al. (2018); Vagos & Pereira (2010); Watanabe (2010).

4. *Standing Up for Yourself*: The ability to remain calm while under pressure or in conflict, and knowing how to effectively diffuse such situations while maintaining one's integrity and self-respect.

Relevant items (10):

11. When it comes to my nationality, race, ethnicity, or religion: a__I say nothing when people insult them. b__I defend them vigorously when necessary. c__People that aren't like me are generally inferior, and I let them know it.

13. When dealing with salespeople: a__I have trouble saying no. b__I can easily say "not today, thanks." c__I usually cut them off or tell them to leave me alone.

17. When I'm arguing with someone: a__I usually concede. b__I'm willing to compromise. c__I usually refuse to back down.

19. When I'm blamed for something I didn't do: a__I usually accept the blame because it's easier than arguing. b__I usually speak up and defend myself. c__I usually try to shift the blame to someone else.

25. When it comes to my beliefs and opinions: a__I usually keep them to myself. b__I'm not afraid to defend them. c__I'm usually right

31. When I feel I am being used by someone: a__I usually do nothing. b__I generally speak up and refuse to continue. c__I sometimes get extremely angry and lash out.

35. When someone is annoying me: a__I generally hope he or she stops soon. b__I typically ask him or her to stop, calmly but firmly. c__I may get angry and shout or threaten violence.

36. If someone were to cut in front of me in a line: a__I would probably pretend it didn't happen. b__I would probably calmly ask him or her to go to the back of the line. c__I might shout at him or her or threaten violence.

39. If someone were to criticize or insult me: a__I would probably feel terrible. b__I might call him or her rude or try to make a joke of it. c__I would probably return the insult.

41. If someone were to interrupt me: a__I would probably let it go and listen. b__I would probably calmly let him or her know that I wasn't finished speaking. c__I would probably talk louder or shout, "Don't interrupt me!"

References: Ames (2008); Ames & Flynn (2007); Arrindell et al. (1990a, 1990b); Chan (1993); Cooley (1979); Gambrell & Richey (1975); Gay et al. (1975); Hollandsworth (1977); Paterson (2000); Shatz (1983); Speed et al. (2018); Vagos & Pereira (2010); Watanabe (2010).

required by our IRB to preserve the anonymity of our participants, we were not able to assess other aspects of reliability, such as test-retest reliability.

We assessed validity in four ways. First, the items on the EACI were derived from empirical studies (Table 1). Second, we found a significant and positive correlation between total questionnaire scores and the total number of assertiveness training hours participants reported (Spearman’s $\rho = .20, p < .001$); similarly, the mean total score of

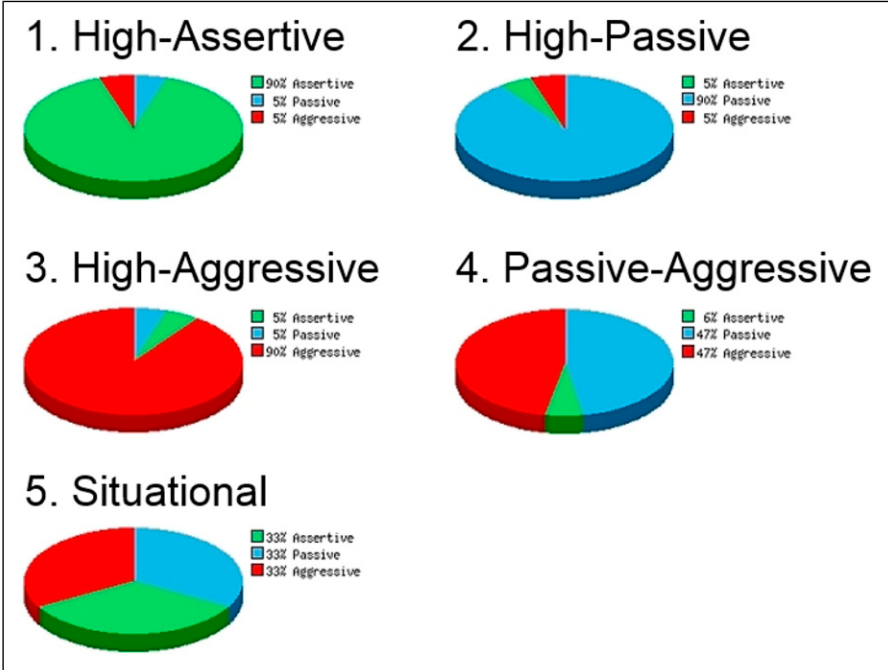


Figure 1. Visualizations of five common assertiveness styles. These five assertiveness styles are included with the results the user is shown after completing the questionnaire.

Table 2. Validity Evidence Based on Self-Reported Criterion Measures.

Criterion Question	Correlation With Total Score
Self-Reported Assertiveness	0.55***
Happiness	0.41***
Personal Success	0.37***
Circle of Friends	0.31***
Professional Success	0.30***

*** $p < .001$.

Table 3. Regression Results Showing How Strongly the Four Competencies Were Associated With Answers to the Criterion Questions.

Competency	Personal Success			Professional Success			Happiness			Circle of Friends			Self-reported Assertiveness		
	β	t	R ²	β	t	R ²	β	t	R ²	β	t	R ²	β	t	R ²
Presenting Yourself Confidently	0.24***	24.49	0.17	0.22***	23.02	0.12	0.33***	33.82	0.21	0.16***	14.99	0.19***	0.19***	20.38	0.31
Communicating Proactively	0.17***	16.56		0.16***	16.75		0.13***	12.62		0.18***	16.26	0.12	0.15***	16.05	
Expressing Your Desires	0.07***	7.11					0.08***	8.06		0.07***	6.33		0.18***	19.48	
Standing Up for Yourself							-0.02*	-2.43		-0.03**	-2.60		0.15***	16.25	

Note. Results are shown for multi-component models in stepwise regressions, one for each of the five criterion questions. β Standardized beta weight from multi-component model in a stepwise regression. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4. Mean Percentage Scores and Demographic Characteristics by Year.

Competencies	Year										Significance Test
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
<i>n</i>	238	786	2049	1535	1399	1102	2219	2279	2521	1559	
Communicating Proactively	60.4 (22.9)	57.0 (24.9)	62.5 (23.1)	65.3 (21.6)	64.1 (21.3)	63.0 (22.8)	65.6 (21.3)	66.2 (22.1)	68.8 (21.3)	66.6 (21.7)	210.85***
Expressing Your Needs and Desires	46.3 (25.1)	42.1 (25.0)	48.4 (23.4)	50.9 (22.5)	49.6 (22.1)	49.6 (23.1)	52.7 (22.6)	52.0 (22.8)	54.2 (22.2)	52.1 (22.0)	214.84***
Presenting Yourself Confidently	48.3 (23.6)	45.7 (23.6)	51.8 (22.8)	55.4 (22.3)	53.5 (21.8)	52.2 (22.1)	55.1 (21.3)	56.3 (21.8)	58.5 (21.3)	54.9 (21.6)	266.47***
Standing Up for Yourself	54.5 (25.5)	49.8 (24.4)	54.4 (23.4)	56.0 (23.1)	55.2 (22.3)	55.5 (22.5)	57.2 (22.8)	57.7 (23.1)	59.0 (22.1)	57.0 (21.9)	127.65***
Total score	52.9 (20.8)	49.0 (21.3)	54.6 (19.6)	57.4 (18.6)	56.1 (17.9)	55.4 (19.0)	58.1 (18.3)	58.5 (18.6)	60.7 (17.8)	58.0 (18.3)	281.32***
Demographics											
Mean age	26.3 (12.4)	24.4 (11.9)	23.1 (10.3)	23.1 (9.5)	22.5 (9.7)	26.9 (11.9)	27.0 (11.3)	26.6 (10.4)	26.2 (9.5)	25.1 (9.6)	38.30***
Percentage females	50.8	54.8	53.2	56.1	50.8	57.4	58.9	55.5	53.9	59.2	93.74***
Percentage whites	64.7	63.9	67.0	66.3	66.8	60.0	46.8	49.7	41.7	46.8	953.38***

Note. Statistics are omitted for 2013 and 2024 because complete data were collected for only a portion of each of those years. SD is shown in parentheses. A Kruskal-Wallis *H* test was used to compare annual mean test scores. A Pearson χ^2 test was used to compare annual percentages of females and whites (the largest groups in the gender and race/ethnicity demographic categories, respectively). A one-way ANOVA was used to compare annual mean ages; the value for the *F*-ratio is shown. ****p* < .001.

people who said they had had assertiveness training was significantly higher than the mean total score of people who had not had such training ($M_{yes} = 26.6$ ($SD = 8.0$), $M_{no} = 23.7$ ($SD = 8.0$), $U = 5,963,263.50$, $p < .001$, $d = 0.36$)³. Third, we found significant positive correlations between participants' assessment of their own levels of assertiveness, passiveness, and aggressiveness and their assertiveness, passiveness, and aggressiveness scores on the EACI (respectively: $\rho = 0.55$, $p < .001$; $\rho = 0.45$, $p < .001$; $\rho = 0.43$, $p < .001$). And fourth, and most important, we found significant positive correlations ($p < .001$), ranging from .30 to .55, between participants' total scores on the EACI and their responses to our five criterion questions (Table 2); it is these correlations that are essential to the concurrent study design. (Note: Because questions on the EACI use an ordinal scale, nonparametric statistics, such as Spearman's ρ , the Mann-Whitney U , and the Kruskal-Wallis H , are used throughout this report. Means and standard deviations are reported for comparison purposes. Questionnaire scores are always given as a percentage of the maximum possible raw score.

Again, because our data were collected online, and because of the anonymity requirements of our IRB, we could not assess validity in other traditional ways – for example, by comparing scores on the EACI to the scores of similar inventories that had already been validated to some extent.

Regression Analyses

We sought to determine the predictive power of our four competencies (without making any assumptions about causation) by regressing them one at a time against each of our five criterion variables (Table 3). The competency Presenting Yourself Confidently proved to be the best predictor of four of the five criterion variables: Personal Success, Professional Success, Happiness, and Self-Reported Assertiveness. The less predictive

Table 5. Gender Differences Across the Four Competencies.

Gender Group	<i>n</i>	Communicating Effectively	Expressing Your Needs and Desires	Standing Up for Yourself	Presenting Yourself Confidently	Total Score
Male	6158	65.0 (22.6)	52.9 (23.3)	57.1 (23.1)	55.9 (21.9)	58.2 (19.0)
Female	8880	65.6 (21.9)	50.0 (22.4)	56.1 (22.8)	54.1 (22.8)	56.8 (18.6)
Other	313	55.3 (22.5)	42.1 (24.3)	48.9 (24.7)	40.1 (23.0)	46.8 (20.1)
$H^{\dagger}$		61.1	103.1	39.3	148.6	107.8
<i>p</i>		<.001	<.001	<.001	<.001	<.001

Note. *SD* is shown in parentheses. [†]A Kruskal-Wallis H test was used to compare gender differences across each individual competency.

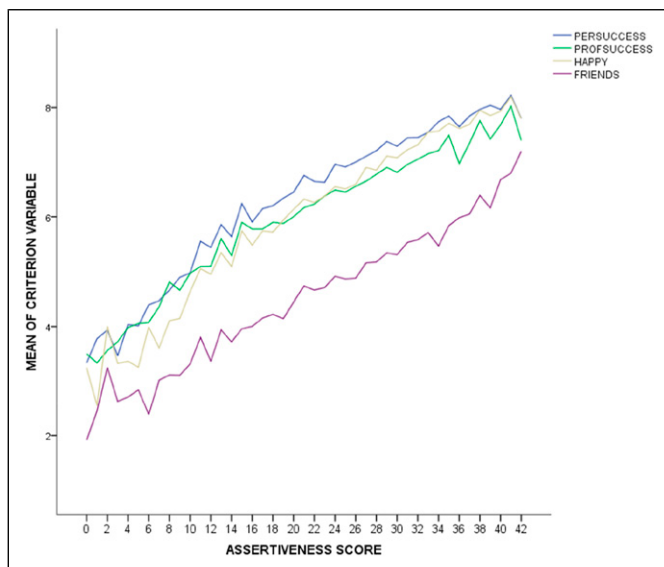


Figure 2. Mean raw assertiveness scores versus the means of four criterion questions. These curves suggest that the more assertive people are, the greater the satisfaction they will have in life: more personal success, more professional success, more happiness, and more friends. These positive relationships are also reflected in the correlations between these criterion variables and the mean assertiveness scores: ρ (pers_success) = .37, $p < .001$; ρ (prof_success) = .30, $p < .001$; ρ (happiness) = .41, $p < .001$; ρ (friends) = .31, $p < .001$.

competencies, in order from most to least predictive, were Communicating Proactively, Expressing Your Needs and Desires, and Standing Up for Yourself (see Table 1 for definitions). Communicating Proactively was the best predictor of the size of one's Circle of Friends.

Year-by-year analysis

Both total scores and scores on the four competencies varied from year to year, and so did the demographic characteristics of the participants. We did not see evidence of a gradual trend over the 10-year period of the study (note: we excluded partial years from our year-by-year analysis of the data) (Table 4), but we did see substantial differences in both demographic characteristics and test scores pre- and post-COVID-19 (that is, in the period from 2014 to 2019 vs. the period from 2020 to 2023). Pre- and post-COVID-19 mean total scores on the questionnaire were significantly different ($M_{Pre} = 54.9$, $M_{Post} = 58.9$, $U = 2.69 \times 107$, $p < .001$, $d = 0.21$), and so was the difference between mean ages ($M_{Pre} = 23.8$, $M_{Post} = 26.4$, $U = 2.26 \times 107$, $p < .001$, $d = 0.23$), mean percentage of females ($M_{Pre} = 53.8$, $M_{Post} = 56.8$, $z = -3.79$, $p < .001$), and mean percentage of whites ($M_{Pre} = 64.8$, $M_{Post} = 46.3$, $z = 23.21$, $p < .001$). Like other researchers before us (e.g., Hargreaves et al., 2021;

Podrug et al., 2023; Zheng & Zheng, 2022), we note the substantial post-COVID changes without claiming to understand their causes or significance. Because COVID spread to different countries at different times, and because different countries – and even different regions within countries – reacted to COVID in dramatically different ways, it is difficult to understand both the primary and secondary effects of this illness (Chanchlani et al., 2020; Chong et al., 2021; Xian et al., 2021).

Gender Differences

We found small but statistically significant differences in total test scores by gender when comparing males, female, and other (Table 5). The difference between males and females was also small but significant ($M_{Male} = 24.3$ (8.0), $M_{Female} = 23.8$ (7.8), $U = 2.6 \times 10^7$, $p < .001$, $d = 0.063$). The difference between other and male-and-female-combined, was much larger ($M_{Other} = 19.6$ (8.4), $M_{MF} = 23.9$ (7.9), $U = 1.6 \times 10^7$, $p < .001$, $d = 0.53$).

Other Demographic Differences

With respect to mean total scores, we also found effects for age (with older people outscoring younger people), race/ethnicity (with Asians significantly outscoring non-

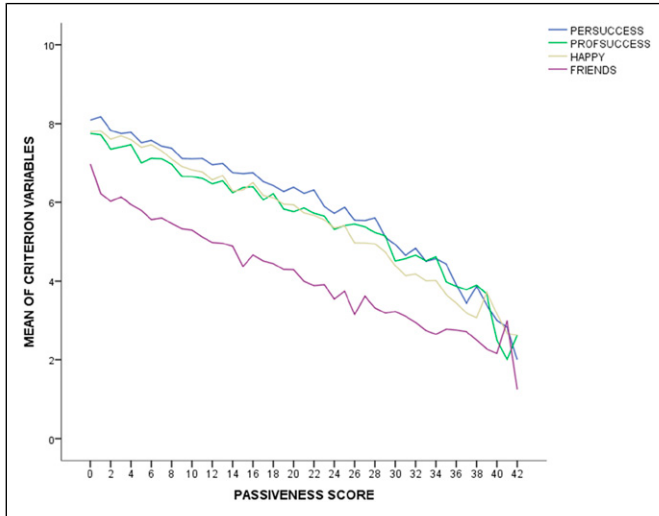


Figure 3. Mean raw passiveness scores versus the means of four criterion questions. These curves suggest that the more passive people are, the less satisfaction they will have in life: less professional success, less personal success, less happiness, and less friends. These negative relationships are also reflected in the correlations between these criterion variables and the mean passiveness scores: ρ (pers_success) = $-.36$, $p < .001$; ρ (prof_success) = $-.30$, $p < .001$; ρ (happiness) = $-.39$, $p < .001$; ρ (friends) = $-.332$, $p < .001$.

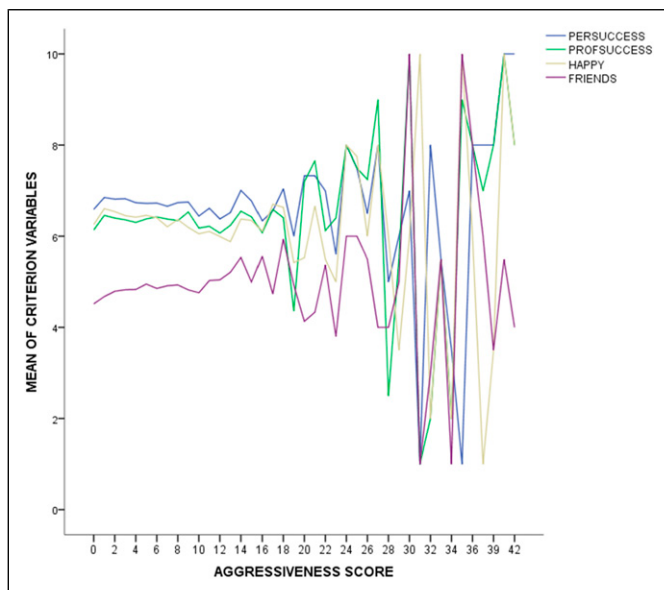


Figure 4. Mean raw aggressiveness scores versus the means of four criterion questions. These curves suggest that a low level of aggressiveness will have relatively little impact on one's life but that increasingly higher levels of aggressiveness can produce both dramatically good and dramatically bad life outcomes. These complex relationships are also reflected in the very small correlations between these criterion variables and the mean aggressiveness scores: ρ (pers_success) = $-.01$, $p = .154$ NS; ρ (prof_success) = $.01$, $p = .123$ NS; ρ (happy) = $-.02$, $p < .01$; ρ (friends) = $.05$, $p < .001$.

Asians), level of education (generally speaking, the higher the level of education completed, the higher the assertiveness score), sexual orientation (with self-labeled straights outscoring self-labeled non-straights), and geographical location (with people from outside the US and Canada outscoring people from the US and Canada by a small but significant margin) (Table S1). Breakdowns of scores on assertiveness, passiveness, and aggressiveness by demographic categories are shown in Tables S1 to S3. Breakdowns of scores on assertiveness, passiveness, and aggressiveness by gender are shown in Tables S4 to S5.

Assertiveness versus Passiveness versus Aggressiveness

Setting aside demographic differences, we also looked at the relationship between participants' answers to four of our five criterion questions – the ones that indicate success and satisfaction in life – and their separate scores for assertiveness, passiveness, and aggressiveness. This proved to be one of the most interesting analyses we conducted in this study.

Figure 2 shows a strong positive relationship between the raw assertiveness scores on the EACI and the magnitude of the replies to those four criterion questions. To put this simply, the more assertive the individual, the more personal success, professional success, happiness, and friends he or she is likely to have in life.

Figure 3, on the other hand, shows a strong negative relationship between the raw passiveness scores on the EACI and the magnitude of the replies to those same four criterion questions. To put this simply, the more passive people are, the less personal success, professional success, happiness, and friends they are likely to have.

And, finally, Figure 4 shows a more complex but plausible and orderly relationship between the raw aggressiveness scores on the EACI and the magnitude of the replies to those same four criterion questions. It shows that a low level of aggressiveness has relatively little impact on one's life, but that increasingly higher levels of aggressiveness will produce both dramatically advantageous and dramatically disadvantageous results.

Discussion

Summary and Conclusions

The present study employed a competencies approach to increase our understanding of assertiveness; our approach also allowed us to shed new light on two behavior styles that are related to assertiveness: passiveness and aggressiveness. From various analyses of data we collected from 16,033 people in 83 countries over a period of more than 11 years, we concluded the following:

- (a) Assertiveness is positively associated with four positive life outcomes: personal success, professional success, happiness, and friendship. Our study thus confirms both the findings of other studies (e.g., [Belen, 2021](#); [Moneva & Bolos, 2020](#); [Parray & Kumar, 2022](#)) and generally held beliefs about the value of assertiveness.
- (b) Passiveness is negatively associated with those four positive life outcomes. In fact, the more passive one is, the less likely one is to be able to enjoy those outcomes ([Fox & Boulton, 2006](#); [Odacı & Kınık, 2018](#)).
- (c) The relationship between aggressiveness and those positive life outcomes is complex and interesting. Expressing a low level of aggressiveness doesn't seem to make much difference in life, but expressing high levels of aggressiveness can produce both dramatically good and dramatically bad outcomes. This pattern not only is consistent with common sense, it also is consistent with the findings of other studies (e.g., [Huesmann et al., 2009](#); [Kaur, 2018](#); [Muñoz-Reyes et al., 2016](#)).
- (d) We found significant effects for gender, age, race/ethnicity, level of education, sexual orientation, and geographical location.

- (e) Using regression analyses, we concluded that the most valuable of the four assertiveness competencies we measured was Presenting Yourself Confidently, which we defined as “The ability to appear confident, be decisive, think positively, and effectively manage anger and emotions.” The other competencies we measured were Communicating Proactively, Expressing Your Needs and Desires, and Standing Up for Yourself.
- (f) Assertiveness training is probably valuable. Participants in our study who had had training in assertiveness scored significantly higher on the EACI than people who had had no such training, and the more training people had had, the higher their scores.

Overall, we believe our study demonstrates the value of using a competencies approach for understanding and training assertiveness.

Limitations and Future Directions

We are aware of at least four limitations in this study. First, because we collected our data from a convenience sample of people on the internet, we were required by our IRB to take precautions to protect their identities. As a result, we could not evaluate our new questionnaire using traditional measures such as test-retest reliability and convergent validity. To make the new questionnaire valuable as a psychometric tool, future research needs to evaluate its reliability and validity more thoroughly than we were able to do in the present study. Second, answers to all five of the criterion questions we asked our participants were self-reported; we had no independent ways of measuring these criteria.

Third, we had no control over the nature of our sample, and hence we cannot confidently assert that our sample is representative of the general population. Moreover, it is likely that an online assertiveness questionnaire will attract people who have a special interest in assertiveness; such people might be systematically different from other people. Our use of convenience sampling limits the generalizability of our findings. On the positive side, we note that our sample was large and diverse (16,033 people from 83 countries) and hence that it is probably more informative than the traditional subject pool from a single university (Goodwin & Goodwin, 2016; Kühberger et al., 2014; Reips, 2012).

Fourth, 42.3% of our participants were English speakers from countries outside the US and Canada, but we did not have enough people in individual countries to allow us to conduct a meaningful multicultural analysis of our data. We were confident in conducting only a simple comparison between the mean score of participants from the US and Canada combined and the mean score of people outside those countries. Because the difference between these two groups was small (Table S1), we also doubt that using an English version of the EACI would be adequate to study cultural differences in assertiveness. To study this issue convincingly, one would likely have to use foreign translations of the questionnaire, as well as to adjust the content of some of the questions to suit the cultures in question.

These are nontrivial limitations, but we do not believe that they necessarily undermine the major findings of this study, particularly the robust findings a through c above. It is difficult to imagine how problems with our sampling could have generated the consistent and distinctive patterns we found in the relationship between scores people obtained on assertiveness, passiveness, and aggressiveness and the answers they gave to our criterion questions (Figures 1–3). As we noted above, these findings are also consistent with the findings of other researchers.

Its limitations notwithstanding, the present study advances our understanding of assertiveness in multiple ways. First and foremost, it demonstrates the value of using a competencies approach to studying and understanding assertiveness, which differentiates it from most studies of assertiveness, which tend to focus on personality traits. The competencies approach, as we noted, is often more valuable than the traits approach in that competencies can not only be measured, they can also be trained and improved; in other words, this approach gives people hope.

The EACI is also unique in that it not only measures assertiveness-related competencies, it also presents results to the user in the form of an easy-to-interpret pie chart that shows how that person's tendencies toward assertive, passive, and aggressive behavior are distributed. It also teaches users about the advantages of assertiveness (Figure S1), the disadvantages of passiveness (Figure S1), and the complexities and risks associated with aggressiveness (Figure S1). We are not aware of another measurement tool in psychology that achieves this unusual combination of useful educational outcomes.

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Author Contributions

Robert Epstein: Conceptualization, Methodology, Project administration, Supervision, Writing – original draft, Writing – review and editing. **Krystie Xiaowen Mei:** Literature Review, Writing – review and editing. **Amanda Newland:** Writing – reviewing and editing. **Leah Rivera:** Formal Analysis, Literature Review, Writing – review and editing. **Shreya Singhi:** Formal Analysis, Writing – review and editing. **Ning Wang:** Literature Review, Writing – review and editing.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Ethical Statement

Consent to Participate

The federally registered Institutional Review Board (IRB) of the sponsoring institution (American Institute for Behavioral Research and Technology) approved this study (protocol number 11015) with exempt status and a waiver of the requirement for informed consent under the US Department of Health and Human Services (HHS) regulations (45 CFR 46.116(d), 45 CFR 46.117(c) (2), and 45 CFR 46.111) because (a) the anonymity of participants was preserved and (b) the risk to participants was minimal. The IRB is registered with the Office for Human Research Protections (OHRP) under number IRB00009303, and the Federalwide Assurance number for the IRB is FWA00021545.

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Data Availability Statement

Data available at: Epstein et al. (2025): EACI. Zenodo. Dataset. <https://doi.org/10.5281/zenodo.15299194>.

Supplemental Material

Supplemental material for this article is available online.

Notes

1. For an example of such a test on BuzzFeed, see https://www.buzzfeed.com/catesevilla/how-assertive-are-you-actually?utm_term=.diKXpkM84#.ayjEk7BDN.
2. <https://www.ebsco.com/products/research-databases/mental-measurements-yearbook>.
3. Because scores on the questionnaire are an ordinal scale of measurement, nonparametric statistics, such as Spearman's ρ , the Mann-Whitney U, and the Kruskal-Wallis H, are used throughout this report. Means and standard deviations are reported for comparison purposes, although the appropriateness of their use with ordinal data has long been debated (e.g., Lord, 1953; Townsend & Ashby, 1984). Test scores are always given as a percentage of the maximum possible raw score.

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