Adaptive and Aggressive Assertiveness Scales (AAA-S)

Renee J. Thompson · Howard Berenbaum

Abstract Diminished assertiveness has been associated with neuroticism, depression, and anxiety. Although many assertiveness instruments have been developed for research and clinical purposes, one common shortcoming is a lack of discriminant validity with regard to aggression. Further, the wording of many instruments is outdated and discriminatory. The goal of the present research was to develop a more sensitive instrument measuring two distinguishable forms of assertiveness: adaptive assertiveness and aggressive assertiveness. We present data validating such a measure, the Adaptive and Aggressive Assertiveness Scales (AAA-S). Participants included two samples of college students and a clinical sample of adults with anxiety disorders. The AAA-S demonstrated good internal consistency and test-retest reliability. The aggressive assertiveness scale was associated with various forms of aggression and peer reports of aggressive assertiveness. The adaptive assertiveness scale was associated with competence and peer reports of adaptive assertiveness. Importantly, there were no gender differences in adaptive assertiveness. Clinical implications are discussed.

Keywords Assertiveness · Aggression · Anxiety

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Low levels of assertiveness are associated with neuroticism as well as with numerous forms of psychological distress including depression, anxiety, and psychosomatic complaints (e.g., Gotlib 1984; Lydiard and Falsetti 1995; Rushton et al. 1989). Thus, it should not be surprising that measures of assertiveness are frequently included in studies of psychopathology and that assertiveness is often addressed in mental health treatments. For example, low levels of assertiveness are targeted in treatments of generalized anxiety disorder (e.g., Brown et al. 2001), social phobia, (Lydiard and Falsetti 1995), posttraumatic stress disorder (e.g., Kubany 2002), depression (e.g., Beck 1995; Young et al. 2001) and bulimia nervosa (e.g., Openshaw et al. 2004).

Given the potential importance of assertiveness for both research and clinical purposes, many instruments measuring assertiveness have been developed: Adult Self-Expression Scale (Gay et al. 1975), The Assertion Inventory (Gambrill and Richey 1975), College Self-Expression Scale (Galassi et al. 1974), College Women's Assertion Sample (MacDonald 1978), Conflict Resolution Scale (McFall and Lillesand 1971), Personal Assertion Analysis (Hedlund and Lindquist 1984), Rathus Assertiveness Schedule (Rathus 1973), and the Wolpe-Lazarus Assertiveness Questionnaire (Wolpe and Lazarus 1966). Many of these assertiveness instruments have been found to have at least moderate levels of convergent validity and have been useful for both research and clinical purposes. Of all the assertiveness instruments listed, the Rathus Assertiveness Schedule (RAS; Rathus 1973) is the most widely referenced (as indicated by having been cited on PsycInfo more often than any other assertiveness instrument as of 03/2011).
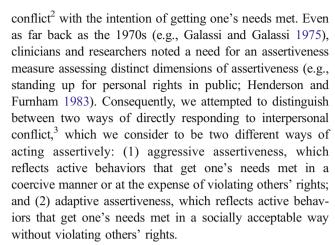
One drawback to some of these measures is that they were specifically developed for use with college students (Peterson 2001; Sears 1986). Another common shortcom-

ing of several other assertiveness instruments is the lack of discriminant validity, especially with regard to aggression. Aggression refers to an action with the intent to be destructive or control others through force (e.g., Averill 1983; Carlson et al. 1989), whereas assertiveness has been defined as "the expression of one's feelings, needs, preference, or opinions in a non-threatening, non-punitive manner" (p. 351; Hollandsworth 1977).[1] Many items on the existing assertiveness instruments appear to confound aggression with assertiveness. For example, over one-third of the RAS items are significantly positively associated with aggressiveness (Rathus 1973; Rathus and Nevid 1977). An example of such an item is, "Anyone attempting to push ahead of me in a line is in for a good battle." Positive associations with aggressiveness have also been found for other assertiveness instruments (e.g., Adult Self-Expression Scale; Gay et al. 1975). Given that the associations between aggressiveness and existing measures of assertiveness have tended to be between medium and large in magnitude, we believe there is a need for a measure of assertiveness that more clearly distinguished between assertiveness and aggression.

Another drawback to the existing assertiveness instruments is that items are presented in ways that are outdated or heterosexist; this is not surprising since they were all developed more than 25 years ago. For example, some existing instruments use terms like "salesman" and "waitress." The RAS contains the item, "I often don't know what to say to attractive persons of the opposite sex." Similarly, the College Self-Expression Scale (Galassi et al. 1974) asks, "Are you reluctant to speak to an attractive acquaintance of the opposite sex?" Even the Personal Assertion Analysis (Hedlund and Lindquist 1984), which differentially assesses passive, aggressive and assertive behaviors asks, "When trying to talk to someone of the opposite sex, you get nervous." Therefore, even if assertiveness instruments have proven to be useful for clinical and research purposes over the past 30 or so years (despite the limitations noted above), we believe the time has come to develop a new assertiveness instrument.

Our development of a new assertiveness instrument was guided by the following definition of assertiveness, which bears some resemblance to that of Hollandsworth (1977): assertiveness is a way of actively responding to interpersonal

conflict[2] with the intention of getting one's needs met. Even as far back as the 1970s (e.g., Galassi and Galassi 1975), clinicians and researchers noted a need for an assertiveness measure assessing distinct dimensions of assertiveness (e.g., standing up for personal rights in public; Henderson and Furnham 1983). Consequently, we attempted to distinguish between two ways of directly responding to interpersonal conflict,[3] which we consider to be two different ways of acting assertively: (1) aggressive assertiveness, which reflects active behaviors that get one's needs met in a coercive manner or at the expense of violating others' rights; and (2) adaptive assertiveness, which reflects active behaviors that get one's needs met in a socially acceptable way without violating others' rights.

The goal of the present research was to develop a new instrument that measures two distinguishable forms of assertiveness, adaptive assertiveness and aggressive assertiveness. We present data from two student samples and an adult clinical sample intended to examine the psychometric properties, as well as the convergent and discriminant validity, of a new assertiveness instrument, the Adaptive and Aggressive Assertiveness Scales (AAA-S). To examine the convergent and discriminant validity of our newly developed measures of adaptive and aggressive assertiveness, we measured: (a) assertiveness as measured by the RAS; (b) peer reports of adaptive and aggressive assertiveness; (c) forms of aggression; (d) competence; (e) negative affect; as well as (f) two facets of anxiety, specifically worry and anxious arousal.

First, we hypothesized that both adaptive assertiveness and aggressive assertiveness would be associated with the RAS because the RAS does not differentiate these two forms of assertiveness. We also expected peer reports of adaptive assertiveness to be more highly associated with self-reported adaptive assertiveness than with self-reported aggressive assertiveness. Similarly, we expected peer reports of aggressive assertiveness to be more highly associated with self-reported aggressive assertiveness than with self-reported adaptive assertiveness. Aggressive assertiveness should be positively associated with forms of aggression (e.g., hostility). As evidence of discriminant validity between our two scales, we expected the associations between forms of aggression and aggressive assertiveness to be stronger than the associations between forms of aggression and adaptive assertiveness. By definition adaptive assertiveness should exhibit associations with constructs related to being able to meet one's needs or goals, such as the construct of competence. In terms of

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[1] The way assertiveness has been conceptualized may shed light on why many assertiveness instruments confound assertiveness and aggression. For example, assertiveness is seen as a part of agency (Bakan 1966), a set of personality traits including dominance, independence, leadership and control. Indeed, many conceptualize assertiveness as similar to dominance (e.g., Twenge 2001). Similarly, much of the early work on assertiveness was based, in part, on a model by Wolpe (1954), which did not distinguish between nonaggressive and aggressive expression.

[2] We are defining interpersonal conflict rather broadly—as a situation involving someone else in which one person's needs are being threatened or are not being met.

[3] There are other ways of getting one's needs met such as acting passive aggressively. However, we consider such responses unassertive because they get needs met in an indirect or passive way.

gender differences, we hypothesized that men would report higher levels of aggressive assertiveness than women because of sex differences found for many forms of aggression (e.g., hostility, physical aggression; Buss and Perry 1992). On the other hand, we did not expect there to be sex differences in adaptive assertiveness since it is tapping the ability to have one's needs met, which we posit should not vary across gender. Lastly, because assertiveness has been found to be associated with psychological distress and is a target of many treatments aimed at internalizing disorders, we expected negative affect, worry and anxious arousal to be inversely associated with adaptive assertiveness.

Method

Scale Description

The Adaptive and Aggressive Assertiveness Scales (AAA-S) is composed of 19 scenarios that depict everyday interpersonal situations in which one might assert oneself. (See Appendix). Assertiveness responses are listed following each scenario. Half of the options reflect adaptive assertiveness responses, and half of the options reflect aggressive assertiveness responses. Participants indicate the extent to which they would react in each given way (1=never, 5=always). An example of a scenario is "I am at the grocery store and several of my items ring up incorrectly, I…" The aggressive assertiveness reaction is "get angry and demand that the cashier change the price." The adaptive assertiveness reaction is "ask the cashier to do a price check on the particular items."

A scenario-based format was chosen for multiple reasons. First, this format includes phenomenological descriptions of adaptive and aggressive assertiveness, which circumvents participants having to differentiate between the concepts of adaptive versus aggressive assertiveness. A second advantage to scenario-based measures, as pointed out by Tangney and Dearing (2002), is that they are less likely than other formats (e.g., adjective checklist) to evoke a defensive reaction from participants. Instead of endorsing a global and possibly off-putting aspect about the self (e.g., aggressive assertiveness), participants evaluate a behavior specific to a situation. Third, because scenario-based measures are not forced-choice, participant may endorse varying or even similar levels of each type of assertiveness.

Response options to each scenario were generated to reflect the definitions of aggression and assertiveness that were noted in the introduction. The scenarios reflecting situations involving interactions with individuals who are familiar and those who are strangers (e.g., cashier) were developed by both authors, who kept in mind the limitations of existing measures (e.g., outdated language). In addition, the authors used their clinical experience treating individuals with anxiety and depressive disorders to generate everyday scenarios in which individuals may struggle to get their needs met. These 19 scenarios and the accompanying 15 adaptive assertiveness and 15 aggressive assertiveness items were selected after pilot testing of an initial sample of 105 undergraduates. The data from these pilot participants were used to delete some items and revise others.

Participants

Student Sample 1 A total of 261 introductory psychology students (none of whom participated in the pilot testing described above) at a large Midwestern university comprised the first sample. Participants provided informed consent and received partial course credit for their participation. They were mostly freshmen and sophomores (79%). The participants were approximately evenly split by sex (55% female), and ranged in age from 17 to 32 (M=19.2, SD=1.7). The sample was 76% European American, 6% African American, 6% Asian American, 3% Latino/a, 3% Biracial American, and 1% Native American.

Participants were asked to solicit someone they knew well to complete a peer-report version of the AAA-S. Sixty-five peer reports (25%) were returned via postal mail. Of those who reported their sex (n=47), 53% were male. The majority of peers (52%) were participants' friends, with the rest reporting as follows: 20% significant others, 19% roommates, and 9% relatives. The duration of the relationship with the participant ranged from 0.1 to 25 years (M=5.5 years, SD=6.0). A multivariate analysis of variance (MANOVA) was conducted on the peer reports of adaptive and aggressive assertiveness, with relationship type a between subjects variable. There was not a significant effect of relationship type on adaptive and aggressive assertiveness, $F(6, 122)$=0.46, *ns*. See Table 1 for means and standard deviations.

A subset of participants (n=49) signed up for a second session, which occurred 2 weeks after their first session. Participants ranged in age from 18 to 32 years old (M= 19.4, SD=2.3) with the majority being female (n=63%) with freshman or sophomore standing (92%). The racial/ethnic make-up was 81% European American, 10% African American, 2% Latino/a, 2% Native American, and 2% "other". This subset of participants did not differ from the rest of the sample in levels of adaptive assertiveness, $t(248) = .82$, *ns*, or aggressive assertiveness, $t(254) = .11$, *ns*, at the first administration of the AAA-S.[4]

Student Sample 2 A total of 281 female introductory psychology students at a large Midwestern university comprised the second sample. The sample was participating

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[4] Degrees of freedom vary across analyses due to missing data (e.g., participant omitting items of an instrument).
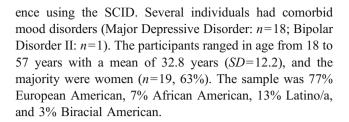
Table 1 Means and standard deviations

	Range	Mean	SD	α
Rathus Assertiveness Schedule				
Student Sample 1	−62.0–72.0	6.2	23.9	.87
Student Sample 2	−68.0–56.0	0.7	25.9	.88
Peer Report				
Adaptive Assertiveness[1]	25.0–68.0	53.1	8.6	.79
Aggressive Assertiveness[1]	15.0–69.0	33.0	10.7	.89
Physical Aggression[2]	9.0–41.0	16.8	6.8	.85
Hostility[2]	8.0–40.0	20.2	6.4	.80
Anger[2]	7.0–30.0	15.6	5.0	.78
Verbal Aggression[2]	5.0–22.0	13.5	3.8	.72
Dominance[2]	13.0–50.0	29.3	6.5	.80
Competence[2]	16.0–49.0	35.1	5.7	.74
Negative Affect				
Student Sample 1	10.0–49.0	21.1	6.4	.84
Clinical Sample	13.0–42.0	27.4	8.3	–
Worry				
Student Sample 1	18.0–79.0	50.4	15.1	.95
Student Sample 2	20.0–80.0	54.3	13.8	.94
Clinical Sample	42.0–80.0	63.1	10.0	–
Anxious Arousal				
Student Sample 2	17.0–73.0	27.2	9.8	.91
Clinical Sample	18.0–62.0	33.4	11.6	–

[1] instrument completed by Student Sample 1

[2] instrument completed by Student Sample 2

in a larger project investigating the relation between psychological distress and rejection (Thompson and Berenbaum 2009). Participants provided informed consent and received partial course credit for their participation. Participants were mostly freshmen and sophomores (92%) and ranged in age from 17 to 29 years (M=18.6, SD=1.1). The sample was 76% European American, 7% African American, 5% Asian American, 7% Latina, 2% Biracial American, and 3% indicated the selection of "other".

Clinical Sample A total of 30 outpatient clients from a stress and anxiety clinic at a community psychological services center comprised the third sample. All clients whose data are included signed an informed consent form releasing their data for use in research or educational purposes. To be eligible for services through the clinic, participants needed to meet criteria for at least one anxiety disorder (e.g., Generalized Anxiety Disorder, Panic Disorder) as assessed by an advanced graduate student using the *Structured Clinical Interview for DSM-IV* (SCID; First et al. 2001). All diagnoses were discussed with and reviewed by supervising faculty who have extensive diagnostic experi-

ence using the SCID. Several individuals had comorbid mood disorders (Major Depressive Disorder: n=18; Bipolar Disorder II: n=1). The participants ranged in age from 18 to 57 years with a mean of 32.8 years (SD=12.2), and the majority were women (n=19, 63%). The sample was 77% European American, 7% African American, 13% Latino/a, and 3% Biracial American.

Instruments

The following instruments were administered to at least one of the three samples. Ranges, means, standard deviations, and internal consistencies of all instruments are shown in Table 1.

Assertiveness In addition to measuring adaptive and aggressive assertiveness with the AAA-S, assertiveness was measured using the 30-item Rathus Assertiveness Schedule (RAS; Rathus 1973) revised to minimize heterosexism.[5] Participants from Studies 1 and 2 indicated on a 6-point scale (−3=*very uncharacteristic*, 3=*very characteristic*) how descriptive each item was of them. Items include "I often have a hard time saying 'no,' " or "I tend to bottle up my emotions rather than make a scene." To assess peer reports of assertiveness, we had a "close other" of the participants from Student Sample 1 complete a modified version of the AAA-S. An example of a modified item is "Your friend is at the grocery store and several of my items ring up incorrectly, he/she…"

Measures of Aggression/Anger

Aggression Several forms of aggression including physical aggression, verbal aggression, anger, and hostility were assessed with the widely used 29-item Aggression Questionnaire (Buss and Perry 1992). Student Sample 2 participants rated each item on a 5-point scale (1=*extremely characteristic of me*, 5=*extremely uncharacteristic of me*). *Physical aggression* included nine items (e.g., "If somebody hits me, I hit back"). *Verbal aggression* included five items (e.g., "I tell my friends openly when I disagree with them"). *Anger* included seven items (e.g., "I am an even-tempered person" [reverse-scored]). *Hostility* included eight items (e.g., "I am sometimes eaten up with jealousy"). The

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[5] Four items (#3, 5, 11 & 19) were slightly revised to update occupational names and/or to minimize heterosexist terminology. For example, the item, "I often don't know what to say to attractive persons of the opposite sex" was revised to "I often don't know what to say to a person whom I find attractive." Other examples include changing "salesmen" to "salesperson" and changing the terms "waiter" or "waitress" to "server."

scales have shown stability over time and have been associated with peer reports of aggression (Buss and Perry 1992). As can be seen in Table 1, the alphas range from .72 to .85, which is adequate for scales with fewer than ten items and are similar to reports by Buss and Perry (1992). *Dominance* was measured using the 11-item dominance scale from the International Personality Item Pool (IPIP; Goldberg et al. 2006). As described by Goldberg et al. (2006), the IPIP dominance scale taps a self-aggrandizing variant of dominance. Using a 5-point scale (1=*very inaccurate*, 5=*very accurate*), participants indicated how descriptive each item was of them in general. Example items include "impose my will on others," and "hate to seem pushy"—reverse scored. The dominance scale has been found to be strongly correlated ($r=.62$) with the narcissism scale from the California Psychological Inventory (CPI; Gough 1996) and has been shown to have good internal consistency (IPIP, 2010).

Measures of Clinical Interest

Competence To assess competence, we administered the 10-item Competence Scale from the IPIP (Goldberg et al. 2006). This measure taps resourcefulness and perseverance. Using a 5-point scale (1=*very inaccurate*, 5=*very accurate*), participants from Student Sample 2 indicated how descriptive each item was of them in general. Example items include "come up with good solutions," and "feel crushed by setbacks." The competence scale has been found to be moderately correlated with the psychological mindedness-scale of the CPI (Gough 1996) and has been shown to have acceptable internal consistency (IPIP, 2010).

Negative Affect Negative affect (NA) was assessed using the 10-item NA scale from the Positive and Negative Affect Schedule (Watson et al. 1988). Using a 5-point scale (1=*very slightly or not at all*, 5=*extremely*), participants from Student Sample 1 and the Clinical Sample indicated the degree to which they felt each of the negative mood states (e.g., upset, nervous) over the past month. The negative affect scale has been demonstrated to have high internal consistency and appropriate levels of test-retest reliability (Watson et al. 1988).

Worry Worry was measured using the 16-item Penn State Worry Questionnaire (PSWQ; Meyer et al. 1990). All participants indicated, using a 5-point scale (1=*not at all typical*; 5=*very typical),* how typical of them were a variety of statements such as "My worries overwhelm me," and "I don't tend to worry about things" (reverse scored). Past research has indicated that the PSWQ has excellent test-retest reliability and good convergent and discriminant validity (Meyer et al. 1990; Nitschke et al. 2001, 1999).

Anxious Arousal We assessed anxious arousal or what some refer to as physiological hyperarousal using the 17-item anxious arousal scale from the Mood and Anxiety Symptom Questionnaire (MASQ; Watson et al. 1995). The MASQ was developed as an instrument that would distinguish between anxiety and depression. Participants from Student Sample 2 and the Clinical Sample indicated, using a five-point scale (1=*not at all*; 5=*extremely*), how descriptive of them were a variety of statements, such as "hands were shaky" and "had a very dry mouth." Anxious arousal has been found to be psychometrically distinct from worry (e.g., Nitschke et al. 2001).

Results

Overview First, we present the results of a factor analysis aimed at determining whether a one- or two-factor model best fit the data. We next present information concerning the psychometric properties of the AAA-S. Third, we present the results of several analyses whose goal was to examine the convergent and discriminant validity of the AAA-S scores.

Factor Analyses We combined Student Samples 1 and 2 ($n=522$ student participants), and for a random selection of half of the participants ($n=261$) an exploratory factor analysis with maximum likelihood extraction and an oblique rotation (direct oblimin) was conducted on the 15 adaptive assertiveness and the 15 aggressive assertiveness items. This analysis was appropriate because we sought to identify latent variables that could correlate (e.g., Fabrigar et al. 1999). Sampling adequacy for the analysis was verified by the Kaiser-Meyer-Olkin (KMO) measure, KMO = .86 (Hutcheson and Sofroniou 1999). The acceptable limit of KMO values of individual terms is .5 (Field 2009); all 30 KMO values of individual items were greater than .72. Correlations between items were sufficiently large, Bartlett's Test of Sphericity, $\chi^2(435)=$ 2338.39, $p<.001$. An initial analysis was run to obtain eigenvalues for each component of the data. This resulted in seven components having eigenvalues over Kaiser's criterion of one, in combination explaining 54.4% of the variance. Extracting factors based on eigenvalues greater than one is problematic, however, as it often results in the overestimation of the number of components (e.g., Zwick and Velicer 1986). Further, several of the components only included one or two items; Costello and Osborne (2005) recommend dropping factors with fewer than three items. An examination of the scree plot
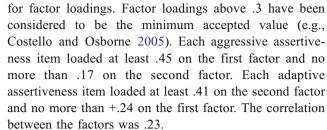
showed a point of inflection reflecting two underlying factors, but interpretations of scree plots have been found to have low reliability (Streiner 1998). Consequently, we determined the number of factors to extract using a statistical procedure, parallel analysis, as recommended (and programmed in SPSS) by O'Connor (2000); results indicated that we retain two components. The first two components in combination explained 34.0% of the variance, with the first factor accounting for 22.4% and the second factor accounting for 11.6% of the variance. The factor loading of items in the pattern matrix reflected the exact make-up of the two scales of the AAA-S. See Table 2

Table 2 Pattern matrix of factor loadings from a two-factor exploratory factor analysis

Item	Component 1	Component 2
2b—aggress	**.60**	−.02
3a—aggress	**.45**	.06
5a—aggress	**.63**	−.09
6a—aggress	**.54**	.04
8b—aggress	**.61**	.17
10a—aggress	**.53**	.05
11a—aggress	**.62**	.04
12a—aggress	**.65**	−.05
14a—aggress	**.74**	−.15
15a—aggress	**.54**	.14
17a—aggress	**.69**	.03
18a—aggress	**.63**	.13
19a—aggress	**.69**	−.13
20a—aggress	**.50**	−.04
21a—aggress	**.57**	.04
1a—adapt	.14	**.42**
2a—adapt	.13	**.48**
3b—adapt	−.12	**.53**
5b—adapt	−.14	**.59**
7a—adapt	.11	**.41**
8a—adapt	−.03	**.55**
10b—adapt	.24	**.43**
11b—adapt	.14	**.46**
13a—adapt	−.09	**.60**
14b—adapt	.23	**.51**
15b—adapt	−.04	**.45**
16a—adapt	−.27	**.59**
17b—adapt	.12	**.57**
18b—adapt	.21	**.49**
19b—adapt	−.05	**.69**

Aggress = aggressive assertiveness item; adapt = adaptive assertiveness item

for factor loadings. Factor loadings above .3 have been considered to be the minimum accepted value (e.g., Costello and Osborne 2005). Each aggressive assertiveness item loaded at least .45 on the first factor and no more than .17 on the second factor. Each adaptive assertiveness item loaded at least .41 on the second factor and no more than +.24 on the first factor. The correlation between the factors was .23.

We also conducted a confirmatory factor analysis (CFA) to directly compare the fit of a single-factor model with that of a two-factor model. The single-factor model assumed that all items would load on a single general assertiveness factor. The second model assumed that items would load onto a two-factor model. The data from the participants who were not randomly selected for the exploratory factor analysis above ($n=261$) were subjected to a CFA using AMOS version 17.0. The one-factor model had a chi-square statistic fit of $\chi^2(405)=$ 1236.08, $p=.00$, and the two-factor model was $\chi^2(404)=$ 717.94, $p=.00$. A chi-square difference test revealed that, as expected, the two-factor model had significantly better fit than the single-factor model, $\chi^2(1)=518.14$, $p<.001$. Chi-squares of large samples can be misleading (Loehlin 1987). We divided the chi-square by the degrees of freedom as a test of goodness of fit. Ratios below 2.0 suggest a reasonable fit. For the one-factor model, the ratio was 3.1, which is a poor fit. The ratio for the two-factor model was 1.8, a better fit than the one-factor model and, as noted above, is considered a reasonable fit. The Root Mean Square Error of Approximation (RMSEA) for the single-factor model was .09. The RMSEA for the two-factor model was .06, which is in line with either an adequate fit (Browne and Cudeck 1993) or a good fit (Hu and Bentler 1999). Other fit indices for the models were as follows: (a) one-factor model: Comparative Fit Index (CFI) =.60, Parsimony Normed Comparative Fit Index (PCFI) = .55; (b) two-factor model, CFI=.85; PCFI=.79; these values do not indicate a good fit for either model. Thus, although better than the fit of the single-factor model, the fit of the two-factor model was marginal.

Psychometric Properties As shown in Table 3, the adaptive and the aggressive assertiveness scales displayed good internal consistency, split-half reliability (when employing the Spearman-Brown correction, as recommended by Streiner (2003)) and 2 week test-retest reliability.

Convergent and Discriminant Validity Next, we tested how scores on the adaptive and aggressive assertiveness

Table 3 Alpha coefficients, observed correlations, and corrected correlations of the AAA-S

	Adaptive assertiveness			Aggressive assertiveness		
	Student sample 1	Student sample 2	Clinical sample	Student sample 1	Student sample 2	Clinical sample
Range	37.0–75.0	31.0–74.0	18.0–68.0	15.0–65.0	15.0–62.0	16.0–50.0
Mean (SD)	57.6 (7.5)	56.8 (7.4)	50.0 (8.4)	33.2 (9.7)	31.6 (8.7)	27.5 (7.6)
Alpha coefficient (α)	.82	.82	.69	.88	.87	.82
Test-retest reliability	.81*	–	–	.86*	–	–
Split half reliability						
Correlations	.65	.65	.44	.78	.71	.60
Spearman-Brown	.79	.79	.61	.88	.83	.73

*$p < .01$.

scales we developed are associated with each other, with RAS scores, and with peer-reported adaptive and aggressive assertiveness (see Table 4). Scores of adaptive and aggressive assertiveness were significantly associated with one another across both student samples. We also expected that scores on both scales of the AAA-S would be associated with RAS scores because all three are tapping some form of assertiveness, and the RAS includes items that tap what we have labeled as adaptive and aggressive assertiveness. As expected, adaptive assertiveness and aggressive assertiveness scores were both significantly associated with RAS scores. Further, the relation between adaptive assertiveness scores and RAS scores was stronger than the relationship between aggressive assertiveness scores and RAS scores for both samples as demonstrated using the formula recommended by Meng et al. (1992) for comparing correlated correlations, zs > 1.98, $p < .05$. Next, as expected and providing

evidence of further validation, peer reports of adaptive assertiveness from Student Sample 1 were significantly correlated with self-reports of adaptive assertiveness. Peer reports of adaptive assertiveness were more strongly correlated with self-reports of adaptive assertiveness than with self-reports of aggressive assertiveness but not at a significant level, $z = 1.22$, ns. In the same sample, peer reports of aggressive assertiveness were significantly associated with self-reports of aggressive assertiveness. Once again, peer reports of aggressive assertiveness were significantly more correlated with self-reports of aggressive assertiveness than with self-reports of adaptive assertiveness, $z = 2.16$, $p < .05$.

Next, we examined the relations between aggressive assertiveness and various forms of aggression. As show in Table 5, all measured forms of aggression (i.e., physical, verbal, hostility, anger) and dominance were significantly associated with the aggressive assertiveness scale of the AAA-S. Further, the correlation coefficients between aggressive assertiveness scores and all four forms of aggression as well as dominance were signifi-

Table 4 Associations among assertiveness instruments

	Adaptive assertiveness	Aggressive assertiveness
Adaptive Assertiveness		
Student Sample 1	–	.33**
Student Sample 2	–	.30**
Rathus Assertiveness Schedule		
Student Sample 1	.61**	.37**
Student Sample 2	.58**	.43**
Peer-Report Adaptive Assertiveness	.34**	.16
Peer-Report Aggressive Assertiveness	.26*	.55**

*$p < .05$, **$p < .01$

Table 5 Associations between the AAA-S and forms of aggression

	Adaptive assertiveness	Aggressive assertiveness
Physical Aggression	.07	.53**
Hostility	−.18**	.35**
Anger	−.04	.51**
Verbal Aggression	.27**	.50**
Dominance	.30**	.54**

All instruments completed by Student Sample 2.

*$p < .05$, **$p < .01$

cantly stronger than the correlation coefficients between these five aggression scores and adaptive assertiveness scores, $zs > 3.57$, $p < .01$.

We next tested the relations between the AAA-S and various measures of potential clinical utility (see Table 6). First, we examined the association between adaptive and aggressive assertiveness scores and competence. We expected a positive relation between competence and adaptive assertiveness scores but not between competence and aggressive assertiveness scores, as competence taps how well individuals can appropriately navigate various situations—an integral part of being adaptively assertive. As expected, we found a significant association between adaptive assertiveness scores and competence, and we did not find a significant relation between aggressive assertiveness scores and competence. Next, we examined the relations between the scales from the AAA-S and anxiety as well as negative affect. As expected, adaptive assertiveness scores, but not aggressive assertiveness scores, were consistently negatively correlated with anxiety (including both worry and anxious arousal) as well as negative affect. Of note, aggressive assertiveness scores were not associated with NA, which suggests that aggressive assertiveness is not just tapping general negative mood.

Finally, we examined whether there were gender differences in adaptive and aggressive assertiveness. Although we did not expect a gender difference for adaptive assertiveness, based on the results of past research (Buss and Perry 2002), we expected males to have higher aggressive assertiveness scores than

females. In Student Sample 1, as expected, females and males did not differ in their adaptive assertiveness scores, females: $M = 57.6$ ($SD = 8.0$), males: $M = 57.6$ ($SD = 6.9$), $t(254) = .01$, ns. In contrast and as expected, males reported higher levels of aggressive assertiveness than did females, females: $M = 32.0$ ($SD = 10.0$), males: $M = 34.6$ ($SD = 9.2$), $t(248) = 2.08$, $p < .05$. We did not examine gender differences in Student Sample 2 because it was composed only of females, nor did we examine gender differences in the Clinical Sample because it included only 11 males.

Discussion

The goal of the present research was to develop a new instrument to measure assertiveness. We wished to overcome two shortcomings of existing assertiveness instruments— outdated wording and the confounding of assertiveness and aggression. Consequently, we developed an instrument, the AAA-S that measures two distinguishable forms of assertiveness, adaptive assertiveness and aggressive assertiveness.

The results of this research indicate that AAA-S scores have good psychometric properties. Scores from both the adaptive and the aggressive assertiveness scales have acceptable internal consistency and test-retest reliability. Results from an exploratory factor analysis in combination with a parallel analysis yielded two factors with the identical make-up of the two scales. Further, results from a confirmatory factor analysis indicated that a two-factor model had a significantly better fit than a one-factor model. It should be noted, however, that the fit of the two-factor model was marginal–this suggests, as we discuss further below, that two factors are probably not sufficient to adequately capture the range of assertive behaviors.

The results of the present research provide evidence that AAA-S scores have good convergent and discriminant validity. Peer reports of adaptive assertiveness were more strongly associated with self-reports of adaptive assertiveness than with self-reports of aggressive assertiveness. Similarly, peer reports of aggressive assertiveness were more strongly associated with self-reports of the aggressive assertiveness than with self-reports of adaptive assertiveness. Further, both adaptive and aggressive assertiveness were associated in expected directions with related constructs. For example, adaptive assertiveness was positively associated with competence—an indicator that one can effectively navigate various situations. Aggressive assertiveness was associated with

Table 6 Clinical utility of the assertiveness instruments

	Adaptive assertiveness	Aggressive assertiveness
Competence—Student Sample 2	.31**	−.11
Negative Affect		
Student Sample 1	−.13*	.08
Clinical Sample[a]	−.27[†]	−.11
Worry		
Student Sample 1	−.23**	−.01
Student Sample 2	−.21**	−.01
Clinical Sample[a]	−.29*	−.07
Anxious Arousal		
Student Sample 2	−.20**	.14*
Clinical Sample[a]	−.42**	.09

[a] one-tailed test

[†] $p < .10$, *$p < .05$. **$p < .01$

various forms of aggression such as hostility and verbal aggression. In addition, aggressive assertiveness was more highly associated with all four forms of aggression (i.e., physical, verbal, hostility, anger) and dominance than was adaptive assertiveness.

Across all three samples, we found that anxiety was inversely related to the adaptive assertiveness. This is consistent with the well established link between anxiety and avoidance (e.g., Borkovec 1994; Craske and Barlow 1988; O'Donnell et al. 2007), as well as with research linking worry with interpersonal concerns (Berenbaum et al. 2007; Borkovec et al. 2002). Higher levels of worrying and higher levels of anxious arousal were associated with lower levels of adaptive assertiveness. Future research with a larger clinical sample is needed to replicate these findings. Future research is also needed to examine whether reductions in worrying or anxious apprehension over the course of treatment would be associated with increased adaptive assertiveness as measured by the AAA-S. If this is the case, then the AAA-S will be a useful instrument to track one aspect of clients' progress in therapy. As noted earlier, low levels of assertiveness are often targeted in the treatment of emotional and other disorders (e.g., generalized anxiety disorder, depression, bulimia nervosa). Since the AAA-S is psychometrically sound, has evidence of both convergent and discriminant validity, yet is relatively brief, we are optimistic that it will prove to be useful in clinical practice.

Women and men reported similar levels of adaptive assertiveness. Compared to women, however, men reported higher levels of aggressive assertiveness. This is consistent with past research that found men reporting higher levels of hostility and physical aggression than did women (Buss and Perry 1992). These gender differences in aggressive assertiveness but not adaptive assertiveness highlight the possibility that sex differences in measures of assertiveness may be due to the confounding of assertiveness with aggression. Although not all research finds sex differences in assertiveness (e.g., Kogan et al. 1995), some research found sex differences in assertiveness with men having higher levels of assertiveness than women (e.g., Costa et al. 2001; Feingold 1994). Given the failure to distinguish aggression and assertiveness, and the fact that men report higher levels of various forms of aggression than do women (e.g., Buss and Perry 1992), it is possible that there are not any sex differences in non-aggressive forms of assertiveness, which, as noted above, is what was found for adaptive assertiveness.

Although we found gender differences with respect to aggressive assertiveness, we only examined gender differences in Sample 1. Sample 2 was composed entirely of females, and Sample 3 was mostly females. Future research is needed to test whether these gender differences replicate. Although Samples 1 and 2 were ethnically diverse, the size of each ethnic group was relatively small. Consequently, we were unable to examine whether aggressive and adaptive assertiveness varied across ethnic groups. Because both of our nonclinical samples were composed of students, future research is needed to examine possible age effects.

One limitation of the AAA-S is that it only measures two direct forms of assertiveness. There are other direct forms of assertiveness such as blackmailing. In addition, if one expands the definition of assertiveness to include any method by which a person pursues a need, then less direct forms of pursuit could also be measured. These forms of indirect assertion could include such forms as shaming (e.g., a boss calling employees lazy in attempts to get them to work harder), modeling (e.g., a person treating a partner how s/he wants to be treated by the partner), and passive aggression (e.g., a parent withdrawing love from a child when the child does not act in accordance with the parent's desires). Future research should examine these and other forms of assertiveness to gain a richer perspective of the way individuals get their needs met. Relatedly, the fit of the two-factor model was marginal. This suggests that there are other aspects of assertive behavior that need to be systematically taken into account beside whether the assertive behavior is adaptive or aggressive.

To summarize, the results of the present research suggest that the AAA-S provides a valid means of assessing assertiveness. It has several advantages compared with alternative instruments. The wording of the AAA-S does not include heterosexist items and reflects terminology considered socially appropriate by present-day standards. Further, it allows the measurement of two separate forms of assertiveness, namely adaptive and aggressive assertiveness. Because of this, the AAA-S allows researchers and clinicians to measure assertiveness in a way that does not confound assertiveness and aggression, and does not underestimate the tendency of women to engage in assertive behaviors.

Appendix A. Adaptive and Aggressive Assertiveness Scales

Below is a list of different common situations you may experience in daily life. Following each situation is a variety of responses. Rate to what extent *each* response best

describes how you would react to the given situation. Here
is an example:

In my free time, I…
  a. Play sports   Never ①   2   3   4   5 Always
  b. Spend time with family   1   2   ③   4   5
  c. Hang out with friends   1   2   3   ④   5
  d. Watch movies   1   2   ③   4   5

1. I have been working at the same company for a while. It has been over a year since
   I received a promotion. I…
   a. Ask my boss about getting a promotion.   Never 1   2   3   4   5   Always

2. When someone close to me unjustly criticizes my behavior, I…
   a. Openly discuss the criticism with the person.   1   2   3   4   5
   b. React angrily and tell the person that she/he shouldn't be throwing stones.   1   2   3   4   5

3. When someone I don't know well borrows something from me and forgets to return it, I…
   a. Demand it back.   1   2   3   4   5
   b. Ask if she/he is done and ask for it back.   .   1   2   3   4   5

4. I am at the grocery store and several of my items ring up incorrectly, I…
   a. Get angry and demand that the cashier change the price.   1   2   3   4   5
   b. Ask the cashier to do a price check on the particular items.   1   2   3   4   5

5. At a meeting at work, I keep trying to say something but keep getting interrupted. I…
   a. Without apologizing, cut the next person off from talking…after all I have been
      waiting to talk too.   1   2   3   4   5

6. My friends and I are trying to decide on a place to eat. They come to a decision about
   going to a place to eat that I do not like. I…
   a. Tell them that I have had some bad experiences there and that I would prefer a
      different place.   1   2   3   4   5

7. If I start to think that someone I don't know well is taking advantage of me, I…
   a. Talk rationally to the person and express concern about the one-sidedness of the
      relationship.   Never 1   2   3   4   5   Always
   b. Tell the person off the next time she/he takes advantage of me again.   1   2   3   4   5

8. When I have to return an item to a store without the original receipt, I…
   a. Take it to the store and demand a refund.   1   2   3   4   5
   b. Stand my ground if the sales person gives me a hard time.   1   2   3   4   5

9. If someone I know well says something that hurts my feelings, I…
   a. Would tell him/her off.   1   2   3   4   5
   b. Provide evidence why the comment was incorrect.   1   2   3   4   5

10. If the postal carrier continually forgets to take my outgoing mail, I…
    a. Raise my voice at him/her the next time I see him/her.   1   2   3   4   5

11. If I find a mistake on a bill I receive in the mail, I…
    a. Call up the company and talk to someone about the mistake.   1   2   3   4   5

12. If someone I don't know well disagrees with me during a conversation, I…
    a. React angrily.   1   2   3   4   5
    b. Continue elaborating on my opinion until the person understands it.   1   2   3   4   5

13. If I am at a performance and someone keeps talking loudly, I…
    a. Would tell the person to shut up.   1   2   3   4   5
    b. Say something to the usher.   1   2   3   4   5

14. If someone I hire is not completing his/her work satisfactorily, I…
    a. Somehow let the person know what to do differently.   1   2   3   4   5

15. If a neighbor I know well returns something of mine in poor shape, I…
    a. Get angry and demand that it be replaced.   Never 1   2   3   4   5   Always
    b. Request that my neighbor replace or fix it.   1   2   3   4   5

16. If someone cuts in line ahead of me at the movies, I…
    a. Start making loud comments about how rude the person is.   1   2   3   4   5
    b. (if I am in a hurry) ask the person to move to the back of the line.   1   2   3   4   5

17. If the new newspaper deliverer does not deliver the newspaper a couple of days, I…
    a. Yell at the newspaper deliverer the next time I see him/her.   1   2   3   4   5
    b. Mention the oversight next time I see him/her.   1   2   3   4   5

18. If a close family member keeps interrupting me when I am talking, I…
    a. Snap at him/her.   1   2   3   4   5

19. If someone close to me kept telling others people things I had told him/her in
    confidence, I would…
    a. Yell at the person the next time I see him/her.   1   2   3   4   5

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