Personality Subtypes in Adolescent and Adult Children of Alcoholics

A Two-Part Study

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Abstract: The authors conducted two studies to identify and to validate potential personality subtypes in the adolescent and adult children of alcoholics. As part of a broader NIMH-funded study, randomly selected psychologists and psychiatrists provided personality data on adolescent ($n = 208$) or adult ($n = 349$) children of alcoholics using a Q-sort procedure (Shedler-Westen Assessment Procedure [SWAP]–II-A for adolescents and SWAP-II for adults), which were subjected to a cluster-analytic procedure, Q-factor analysis. Q-factor analysis yielded five personality subtypes in both groups. Despite the different samples and age groups, four of the personality subtypes were highly similar, including externalizing, inhibited, emotionally dysregulated, and high-functioning. Providing initial data on their validity, the subtypes differed on axis I and II pathology, adaptive functioning, and developmental and family history variables. These findings show heterogeneity among children of alcoholics and suggest the importance of addressing personality subtypes for research and practice in treating adolescent and adult children of alcoholics.

Key Words: Personality subtypes, children of alcoholics, Shelder-Westen Assessment Procedure, Q-factor analysis.

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Estimates suggest that 10% to 15% of Americans are alcoholics (Stinson et al., 2005) and more than 28 million people in the United States alone are children of alcoholics (Obot et al., 2001). Children of alcoholics (COAs) are at 3 to 4 times the risk for developing alcoholism than a child without an alcoholic parent, and daughters of alcoholics are more likely to marry alcoholic men, perpetuating the cycle to future generations (Obot et al., 2001). Although not all COAs become alcoholic themselves, COAs are at an increased risk for many additional problems throughout their lives. Adult children of alcoholics (ACOAs) report increased difficulties at work, more interpersonal problems, and higher levels of emotional distress than comparison subjects (Baker and Stephenson, 1995; Coleman and Frick, 1994; Mathew et al., 1993). As personality is a diathesis for many axis I symptoms, a better understanding of the enduring cognitive, affective, and relational factors that place COAs at risk is warranted to develop more effective treatment and prevention.

Research indicates that personality may mediate the intergenerational link to alcoholism through multiple pathways (Coleman and Frick, 1994). One such pathway toward alcoholism that is mediated by personality is genetics because heredity accounts for up to 60% of the variance in the diffusion of alcoholism (Coleman and Frick, 1994; McGue, 1997; Prescott and Kendler, 1999). Another pathway is psychosocial factors, such as the development of ways to deal with growing up in an abusive or chaotic alcoholic household (Potter-Efron, 1990), modeling or identification with an alcoholic parent, or deidentification with an alcoholic parent (resolving never to be like him or her).

Personality in Children of Alcoholics

Research on the personality characteristics of COAs is highly variable and often contradictory. The personality dimension most associated with COAs is impulsivity/disinhibition, encompassing traits such as sensation seeking, aggressiveness, and impulsivity (Coleman and Frick, 1994; Sher, 1991, 1997; Windle, 1990). In addition, COAs show lower self-esteem, higher dependency, manipulative behaviors, neuroticism, and perfectionism (Baker and Stephenson, 1995; Carpenter, 1995; Fisher et al., 1992; Roebuck et al., 1999; Stinson et al., 2005).

Contradictory findings in studies examining differences between COAs and comparison subjects has led researchers to question whether COAs are homogeneous with respect to personality (D'Andrea et al., 1994). Families of alcoholics vary on a continuum of dysfunction (Lease, 2002) because many other psychological disorders and disturbances in parenting (*e.g.*, abuse) can coexist with parental alcoholism. Familial dysfunction can produce a variety of different consequences on the personality of COAs (Sher, 1997). As such, researchers have considered that differences between COAs and non-COAs may simply be masked by the heterogeneity of COAs (D'Andrea et al., 1994). In an effort to disentangle mixed and contradictory findings, several clinical and empirical studies have investigated the presence of personality subtypes among COAs.

Personality Subtypes in Children of Alcoholics

Theory and research on subtyping COAs began decades ago with clinically-based taxonomies. Wegscheider (1981) proposed five personality styles in COAs based on clinical experience (*i.e.*, The Enabler, Hero, Scapegoat, Lost Child, and Mascot). Black (1979) proposed similar subtypes of COAs, with the addition of "The Placater." However, empirical support for these clinical taxonomies is weak. Rhodes and Blackham (1987) developed four scales with internal consistency to quantify characteristics of the Hero, Lost Child, Scapegoat, and the Placater. However, significant differences between COAs and non-COAs only emerged on the Scapegoat scale. Devine and Braithwaite (1993), in a study attempting to validate the five roles described by Black and Wegscheider, found that the subtypes were able to discriminate COAs and non-COAs. However, these five roles were not exclusively linked to parental alcoholism. Context variables such as family disruption were a more potent predictor.

The limitations of the clinically derived composite portraits of COAs have led researchers to search for other personality subtypes. D'Andrea et al. (1994) found three personality subtypes among COAs. The first subtype showed elevations on sociability, self-acceptance,

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well-being, responsibility, self-control, achievement, and intellectual efficiency. Subtype 2 scored slightly below subtype 1 on all of the previously mentioned scales but still maintained scores characteristic of a normal population. Subtype 3 produced low scores on all of these scales and was significantly associated with higher rates of parental death, sexual abuse, and physical abuse. Although these findings suggest the possibility of personality subtypes, they largely discriminate relatively healthy from relatively disturbed individuals, with more troubled histories compounding parental alcoholism.

In an attempt to bridge the previously inconsistent findings on COA personality subtypes, we undertook two studies designed to identify the personality subtypes of adolescent and adult COAs. Rather than start from a theoretically derived taxonomy of COAs, we report on two studies that attempted to identify personality subtypes using an instrument with adolescent and adult versions (Shedler-Westen Assessment Procedure [SWAP]) designed to capture subtle aspects of a range of personality, thereby elucidating or corroborating existing personality subtypes. Statistical procedures that produce dimensional (*i.e.*, the extent to which the patient matches a personality prototype, which can vary from not at all to substantially) or categorical subtypes were implemented on SWAP results of COAs. We used Q-factor analysis on two separate samples, one of adolescents ($N = 208$) and one of adults ($N = 349$), to determine whether personality subtypes are similar across the two different age groups. No previous research has examined ACOA personality subtypes or compared the personality subtypes of COAs across the two age groups. Therefore, this section of the study was exploratory. The differences among the subtypes within each sample on criterion variables indicative of a valid taxonomy, specifically a) axis I diagnoses, b) axis II pathology, c) adaptive functioning, and d) etiological variables such as developmental and family history, were examined.

STUDY 1: PERSONALITY SUBTYPES IN ADOLESCENTS WITH AN ALCOHOLIC PARENT

The adolescent sample was collected as part of a NIMH-funded project on the nature and classification of adolescent personality pathology broadly defined, including not only the severe disturbances captured on the axis II of DSM-IV (American Psychiatric Association, 1994) but also the wider range of personality problems seen in patients currently described as having "subthreshold" pathology. The patients were not preselected for a parental history of alcoholism; rather, parental history was one variable of many recorded as part of the broader study. The studies involving both adolescents and adults received approval by the university ethics board (institutional review board), and participation was informed and voluntary.

Materials and Methods

The methods for both study 1 and study 2 have been described elsewhere in detail (Westen and Shedler, 2007). We ascertained the sample as follows: 950 doctoral-level clinicians who treat adolescents completed a battery of psychometric instruments on a randomly selected patient aged 13 to 18 years in their care. Each clinician provided data on only one patient; therefore, there was no overlap among the informants or patients across the study. All clinicians completed measures of personality pathology, adaptive functioning, and developmental history that we used as criterion variables to assess the validity and association with personality pathology.

A practice network approach was used, in which randomly selected, experienced clinicians provided data on patients that can be aggregated for large-participant pool research on the nature, classification, and treatment of psychopathology (Dutra et al., 2004; Westen and Shedler, 1999a, 1999b; Westen et al., 2003; Westen and Weinberger, 2004). Multiple studies using this method suggest that a) clinician descriptions of patients strongly correlate with interview-based assessments, typically ranging from $r = 0.50$ to 0.80 (Hilsenroth et al., 2000), b) clinician descriptions predict criterion variables such as developmental and family psychiatric history in ways that are theoretically predictable and unrelated to the clinicians' theoretical orientation or training (Dutra et al., 2004; Westen et al., 2003), c) the factor structure of clinician-report versions of established instruments such as the Child Behavior Checklist (CBCL; Achenbach, 1991) tends to be similar to the factor structure that emerges with other informants (Dutra et al., 2004), and d) clinicians tend to use appropriately conservative rules of inference in assessing etiologically relevant variables such as family and developmental history (*e.g.*, requiring intact pretreatment memories or other corroborating data before ascribing confidence to a history of childhood sexual abuse; DeFife et al., 2010; Wilkinson-Ryan and Westen, 2000).

A random national sample of psychiatrists and psychologists with at least 5 years experience postresidency (MDs) or postlicensure (PhDs) from the membership registers of the American Psychiatric and American Psychological Associations was contacted. We selected all clinicians whose membership records indicated an interest in children or adolescents and supplemented this where necessary with a general sample, given that many clinicians treat adolescents as well as adults. Over one third of clinicians agreed to participate in the study. Participating clinicians received a consulting fee of $200 for a procedure that required approximately 2 hours of time.

The clinicians were asked to describe "an adolescent patient you are currently treating or evaluating who has an enduring pattern of thoughts, feeling, motivation, or behavior—that is, personality problems—that cause distress or dysfunction." To obtain a broad range of personality pathology, from relatively minimal to substantial, we emphasized that the patients must have problematic personality traits but does not need to have a personality disorder diagnosis. To avoid biasing the sample one way or another, we instructed the clinicians to disregard the caveats in the DSM-IV regarding the application of axis II diagnoses to adolescents and simply to select a patient with any degree or form of personality pathology as defined previously. To further minimize selection bias, we directed the clinicians to consult their calendars to select the last patient they saw during the previous week who met study the criteria. We obtained a stratified random sample, stratifying on age (13 to 18 years) and sex. The only exclusion criteria were chronic psychosis and mental retardation. In addition, we asked the clinicians to select a patient whose personality they felt they knew, using, as a guideline, six or more clinical contact hours but in 2 years or less (to minimize confounds imposed by personality change with treatment).

Measures

Clinical Data Form for Adolescents. The Clinical Data Form (CDF), which has adult and adolescent versions (CDF and CDF-A, respectively) is a clinician-report form developed over several years that assesses a range of variables relevant to demographics, diagnosis, and etiology (Westen et al., 2003; Westen and Shedler, 1999a, 1999b). Clinicians first provide demographic data on themselves and the patient. They then rate the patient's adaptive functioning using a number of indices, such as ratings of school performance and peer relations, and relatively objective indicators such as the history of arrests, suicide attempts, and psychiatric hospitalizations. Research has demonstrated that clinician ratings of adaptive functioning variables show high interrater reliability and validity (*e.g.*, correlations with the same data obtained by independent interview, $r > 0.60$; Hilsenroth et al., 2000; Westen et al., 1997).

The next section of the CDF assesses aspects of the patient's developmental and family history with which clinicians who have met with adolescents and/or their parents for several sessions are likely to be familiar. The CDF assesses a wide range of variables of potential etiological relevance, such as history of foster care, family stability,

and physical or sexual abuse. Clinicians working with adolescent patients generally have relatively direct access to such information, from having met with parents and/or other collateral sources. The adolescents who were studied in this investigation were selected based on the clinician's response to a question in the CDF-A: "Has the patient had an alcoholic parent or stepparent living in the home for a substantial period of time?" If the clinician answered yes, then the participant was included in our sample of adolescent children of alcoholics. This includes adolescent children of an alcoholic mother, father, or stepparent. The clinicians were instructed on all such questions to answer "no" unless confident in their response.

Axis I Checklist. To diagnose DSM-IV axis I disorders common to COAs without relying on clinicians to apply DSM-IV diagnostic algorithms, we asked the clinicians to circle "no" or "yes" in response to a randomly ordered diagnostic criteria taken directly from the DSM-IV diagnoses of major depressive disorder, general anxiety disorder, substance abuse disorder, and social phobia.

Axis II Checklist. To generate both categorical and dimensional DSM-IV PD diagnoses (without depending on clinicians to make free-form diagnoses, which tend to be unreliable), we presented the clinicians with a randomly ordered checklist of the criteria for all axis II disorders. In previous studies, this method has produced results that mirror findings based on structured interviews such as the Structured Clinical Interview for DSM–II (Blais and Norman, 1997; Morey, 1988; Westen et al., 2003). To create categorical diagnoses, we applied DSM-IV decision rules to the present/absent data. To generate DSM-IV dimensional diagnoses that mirror those widely used in the PD literature, we summed the number of criteria judged present for each disorder. Previous research with both adolescents and adults found that axis II ratings collected in this manner have similar external correlates and produce similar patterns of comorbidity to those obtained in structured interviews (Westen et al., 2003; Zittel and Westen, 2005).

The Shedler-Westen Assessment Procedure for Adolescents. The Shedler-Westen Assessment Procedure for Adolescents (SWAP-II-A), the most recent version of the SWAP-200-A for adolescents (Westen et al., 2003; Westen et al., 2005), is a 200-item personality pathology Q-sort designed for use by clinically experienced observers based on longitudinal information over the course of treatment or a systematic clinical diagnostic interview of the patient and parents (Westen and Muderrisoglu, 2003). The clinician sorts (rank-orders) the 200 personality statements into eight categories based on their applicability to the patient, from those that are not descriptive (assigned a value of 0) to those that are highly descriptive (assigned a 7). Statements that apply to a greater or lesser degree are placed in intermediate categories.

Both the adult and adolescent versions of the SWAP show considerable evidence of reliability and validity (Westen and Shedler, 2007), predicting a range of measures of adaptive functioning (*e.g.*, history of hospitalizations, school performance, and violence), psychopathology (*e.g.*, the CBCL), etiological variables (*e.g.*, childhood history of physical and sexual abuse and family history of internalizing and externalizing disorders), and personality as assessed by independent interviewers blind to clinician data (Nakash-Eisikovits et al., 2002; Westen and Shedler, 1999a, 1999b; Westen et al., 2003). Empirically, the clinicians' theoretical orientation and professional degree (psychology or psychiatry) has little impact on the way they use the instrument (Shedler and Westen, 2004a, 2004b).

Results

The sample of adolescent COAs (*N* = 208) was 50.7% male with an average (SD) age of 15.5 (1.6) years. The sample was 75.1% white, 10% Hispanic, and 8.7% African-American, with the socioeconomic status rated as 14.4% poor, 32.9% working class, 34.9% middle class, and 14.4% upper class. Patients with complete data on

each of the overlapping measurement tools were selected for the control group (*n* = 266). They were 48% male with an average age of 15.6 (1.61) years. The control was 80.5% white, 5.6% Hispanic, and 6.8% African-American with 2.3% considered poor, 15.4% working class, 43.2% middle class, and 30.5% upper class. The respondents (26.6% psychiatrists) were highly experienced, with a mean of 17.4 (8.8) years of posttraining experience.

Identifying Personality-Based Subgroups

To identify the potential subgroups of patients based on personality profiles, we used Q-factor analysis (also called Q-analysis), a technique that has been used effectively in studies of normal personality as well as PDs in adults and adolescents (Westen and Harnden-Fischer, 2001; Westen and Shedler, 1999a, 1999b; Westen et al., 2003). Whereas conventional factor analysis identifies items that share a common underlying dimension, Q-analysis as applied to personality data identifies patients who share a core personality style or organization (*i.e.*, patients who have similar profiles across items). Two advantages of Q-factor analysis relative to other clustering procedures are, first, that it does not require the assumption of mutually exclusive types (*i.e.*, patients can load on multiple factors, to differing degrees) and, second, that it does not assume that subgroups exist (*i.e.*, like conventional factor analysis, it can identify unidimensional and multidimensional constructs).

We followed standard factor-analytic procedures, first entering the data into a principal components analysis, specifying eigenvalues of 1 or greater (Kaiser's criteria), and using the screen plot, percentage of variance accounted for, and parallel analysis (Horn, 1965; O'Connor, 2000) to determine the number of Q-factors to rotate. These procedures suggested a five- to seven-factor solution. We applied multiple estimation procedures with four to seven factors to increase the likelihood of identifying robust and coherent factors. We created dimensional and categorical scores for each patient as follows. For dimensional scores, we used Q-correlations, which reflect the correlation or "match" between each patient's 200-item profile and the empirically generated 200-item Q-factor profiles. We created categorical subgroup diagnoses by assigning the patients to the group for which they had the highest Q-correlation (similar to a factor loading) of 0.40 or higher. Although continuous data produced essentially the same pattern of results, we treated Q-factors categorically in several analyses (*e.g.*, percentage of patients meeting the criteria for comorbid axis I and axis II diagnoses) for ease of interpretation.

Q-factor analysis identified five subgroups (Q-factors). We report here the unweighted least squares (ULS) solution with Promax (oblique) rotation, which accounted for 39.9% of the variance (18%, 10.3%, 4.6%, 3.8%, and 3.2% for each Q-factor, respectively). The median correlation among factors was *r* = 0.08. Table 1 shows the items most characteristic of each subgroup. The items are arranged in descending order based on factor scores and are expressed in standard deviation units, which reflect the item's centrality to the construct relative to the other items in the item set (in Q-factor analysis, as opposed to conventional factor analysis, the patients load on factors and the items receive factor scores). The Q-factors were labeled using the terms *Angry/Externalizing*, *Awkward/Inhibited*, *Hyperconscientious/High-functioning*, *Emotionally Dysregulated*, and *Sexualized/Self-defeating*.

Patients who matched the Angry/Externalizing subtype were characterized by their tendency to be rebellious, angry, manipulative, impulsive, and deceitful. They also demonstrated psychopathic features such as remorselessness, lack of empathy, and unresponsiveness to consequences. The patients who matched the Awkward/Inhibited prototype were characterized by a lack of social skills and relationships and feelings of inadequacy, depression, neglect, and powerlessness. Hyperconcientious/High-functioning adolescents were liked

TABLE 1. Empirically Derived Adolescent Personality Subtypes ($N = 208$)

	Factor Score (SD Units)
Q-Factor 1: Angry/Externalizing ($n = 76$)	
Is rebellious or defiant toward authority figures; tends to be oppositional, contrary, quick to disagree, etc.	3.13
Tends to be angry or hostile (whether consciously or unconsciously).	2.71
Tends to blame own failures or shortcomings on other people or circumstances; attributes his/her difficulties to external factors rather than accepting responsibility for own conduct or choices.	2.55
Attempts to avoid feeling helpless or depressed by becoming angry instead.	2.47
Tends to be manipulative.	2.44
Is prone to intense anger, out of proportion to the situation at hand (e.g., has rage episodes).	2.33
Tends to be critical of others.	2.19
Has little empathy; seems unable or unwilling to understand or respond to others' needs or feelings.	2.08
Tends to feel misunderstood, mistreated, or victimized.	2.03
Tends to act impulsively (e.g., acts without forethought or concern for consequences).	2.03
Q-Factor 2: Awkward/Inhibited ($n = 44$)	
Tends to feel like an outcast or outsider.	2.95
Tends to be shy or self-conscious in social situations.	2.91
Tends to feel s/he is inadequate, inferior, or a failure.	2.72
Lacks social skills; tends to be socially awkward or inappropriate.	2.72
Tends to avoid, or tries to avoid, social situations because of fear of embarrassment or humiliation.	2.34
Tends to be passive and unassertive.	2.28
Tends to give up quickly when frustrated or challenged.	2.25
Lacks close friendships and relationships.	2.16
Tends to feel unhappy, depressed, or despondent.	2.14
Tends to be ignored, neglected, or avoided by peers.	2.08
Q-Factor 3: Hyperconscientious/High-Functioning ($n = 46$)	
Is articulate; can express self well in words.	3.56
Tends to be conscientious and responsible.	2.69
Has moral and ethical standards and strives to live up to them.	2.67
Tends to be liked by other people.	2.40
Has a good sense of humor.	2.24
Tends to feel unhappy, depressed, or despondent.	2.20
Is capable of sustaining meaningful relationships characterized by genuine intimacy and caring.	2.15
Enjoys challenges; takes pleasure in accomplishing things.	2.11
Is empathic; is sensitive and responsive to other peoples' needs and feelings.	2.02
Tends to feel anxious.	2.01
Q-Factor 4: Emotionally Dysregulated ($n = 28$)	
Emotions tend to spiral out of control, leading to extremes of anxiety, sadness, rage, etc.	3.91
Emotions tend to change rapidly and unpredictably.	3.31
Expresses emotion in exaggerated and theatrical ways.	2.99
Tends to have extreme reactions to perceived slights or criticism (e.g., may react with rage, humiliation, etc.).	2.84
Tends to become irrational when strong emotions are stirred up; may show a significant decline from customary level of functioning.	2.72
Is prone to intense anger, out of proportion to the situation at hand (e.g., has rage episodes).	2.41
Tends to be needy or dependent.	2.40
When upset, has trouble perceiving both positive and negative qualities in the same person at the same time (e.g., may see others in black or white terms, shift suddenly from seeing someone as caring to seeing him/her as malevolent and intentionally hurtful, etc.).	2.34
Is unable to soothe or comfort him/herself without the help of another person (i.e., has difficulty regulating own emotions).	2.33
When distressed, tends to revert to earlier, less mature ways of coping (e.g., clinging, whining, having tantrums).	2.29
Q-Factor 5: Sexualized/Self-Defeating ($n = 14$)	
Tends to abuse alcohol or drugs (beyond what is normative given his/her age, background, etc.).	4.38
Tends to surround himself/herself with peers who are delinquent or deeply alienated.	3.21
Is prone to painful feelings of emptiness (e.g., may feel lost, bereft, abjectly alone even in the presence of others, etc.).	2.52
Is sexually promiscuous for a person of his/her age, background, etc.	2.36
Tends to engage in self-mutilating behavior (e.g., self-cutting, self-burning, etc.).	2.25
Tends to run away from home.	2.16

TABLE 1. *(Continued)*

	Factor Score (SD Units)
Tends to become attached quickly or intensely; develops feelings, expectations, etc. that are not warranted by the history or context of the relationship.	2.08
Tends to get drawn into relationships outside the family in which s/he is emotionally or physically abused, or needlessly puts self in dangerous situations (*e.g.*, walking alone or meeting strangers in unsafe places).	2.01
Tends to be sexually seductive or provocative (*e.g.*, may be inappropriately flirtatious, preoccupied with sexual conquest, prone to use his/her physical attractiveness to an excessive degree to gain notice).	1.92
Tends to seek thrills, novelty, excitement, etc.; appears to require a high level of stimulation.	1.87

by others, articulate, and assertive. However, the adolescents who matched this subtype also tended to exhibit feelings of depression, guilt, and anxiety about living up to their own moral and ethical standards. Emotionally Dysregulated patients had many borderline personality disorder (BPD) features, notably a tendency for emotions to spiral out of control, a tendency to have difficulty in soothing themselves in times of emotional distress, and a tendency to have problems with identity formation and impulsivity. Finally, Sexualized/Self-defeating adolescents tended to abuse alcohol, to act provocatively and promiscuously sexually, became attached quickly and often in abusive relationships, and engaged in self-mutilating behavior.

Validating the Personality Subtypes

The first step in taxonomic work is to identify the potential diagnostic groupings. The second is to assess their validity or external correlates. In this study, we examined the relation between the personality subtypes and three sets of criterion variables: diagnostic variables, adaptive functioning variables, and variables of potential etiological significance. For diagnostic criterion variables, we treated the subgroups categorically for ease of presentation; for all other analyses, we report correlational (dimensional) analyses.

We tested the validity of the subtypes by examining their external correlates using contrast analysis and correlational analysis. Where appropriate, we used contrast analysis, which maximizes power, minimizes the likelihood of spurious findings resulting from running multiple analyses, and tests focal, one-tailed hypotheses (about the relative ordering of group means) rather than global questions that are usually of less theoretical interest (*e.g.*, whether group means differed in some unspecified way; Rosenthal et al., 1999). We generated contrast weights (*i.e.*, hypotheses about the relative ordering of means) based on previous research and examination of the item content of the subgroups, before examining their association with external criterion variables. For nondiagnostic criterion variables, to maximize power, we analyzed the data dimensionally, correlating the patients' scores on each personality dimension with variables of interest. To maximize the reliability of external correlates, we aggregated the ratings of relevant constructs to create composite variables related to adaptive functioning and developmental history (*e.g.*, the mean number of adverse childhood events), first standardizing where appropriate.

Table 2 presents the correlations between personality subtypes and axes I and II comorbidity. We report in the table both our a priori hypotheses (in the form of contrast weights) and the findings. Treated categorically, the rates of axis I disorders among personality subtypes did not differ for social phobia disorder, major depressive disorder, or generalized anxiety disorder. However, the Angry/Externalizing and Sexualized/Self-defeating subtypes differed significantly from the other subtypes in the presence of substance abuse disorder (41% and 79%, respectively). For axis II pathology, as predicted, the Awkward/Inhibited subtype had the highest rates of avoidant personality disorder, the Emotionally Dysregulated and Sexualized/Self-defeating groups

had the highest rates of BPD, the Angry/Externalizing subtype had the highest rates of antisocial personality disorder, and the Hyperconcientious/High-functioning group had the least axis II pathology.

Table 3 presents the correlations between the personality subtypes (treated dimensionally) and composite measures of adaptive functioning. Both the Angry/Externalizing and Emotionally Dysregulated dimensions were associated with poor global functioning. The Awkward/Inhibited and Angry/Externalizing dimensions were associated with poor school functioning, whereas the Emotionally Dysregulated dimension was uniquely associated with suicide attempts and hospitalizations. Table 3 also includes data on variables of potential etiologic significance (developmental and family history). The predictions were made based on previous personality pathology research. For example, the Emotionally Dysregulated dimension was predicted to be positively correlated with sexual abuse, disrupted childhood attachment, and a family history of suicide. Predicted positive correlations are boldfaced in Table 3. The Angry/Externalizing dimension was highly associated with an adverse childhood environment, childhood attachment disruption, physical abuse, childhood psychopathy, and a family history of criminality. The Emotionally Dysregulated dimension was also associated with an adverse childhood environment and physical abuse as well as sexual abuse. As expected, the Sexualized/Self-defeating dimension was highly correlated with sexual abuse. Overall, the Hyperconscientious/High-functioning dimension was negatively associated with most developmental and familial risk factors.

STUDY 2: PERSONALITY SUBTYPES IN ADULTS WITH AN ALCOHOLIC PARENT

The second study focuses on adult children of alcoholics (older than 18 years), using comparable methods.

Materials and Methods

We collected an adult sample as part of an NIMH-funded project on the nature and classification of adolescent personality pathology broadly defined, as in study 1. A total of 1201 doctoral-level clinicians completed a battery of psychometric instruments on a randomly selected patient older than 18 years in their care. To obtain a broad range of personality pathology, we emphasized that the patients need not have a PD diagnosis. Patients had to meet the following additional inclusion criteria: 18 years or older, not currently psychotic, and known well by the clinician (once again using the guideline of ≥6 clinical contact hours but in ≤2 years). To minimize selection biases, we once again directed the clinicians to consult their calendars to select the last patient they saw during the previous week who met the study criteria.

Measures

The measures used were identical to those used in study 1, except that we used the adult forms of all measures (the CDF and SWAP-II).

TABLE 2. Axis I and Axis II Pathology by Personality Subtype (Percentage Meeting DSM-IV Criteria)

	Control (n = 262) Mean (SD)	Angry/Externalizing (n = 76), Mean (SD)	Awkward/Inhibited (n = 44), Mean (SD)	Hyperconscientious/High-Functioning (n = 46), Mean (SD)	Emotionally Dysregulated (n = 28) Mean (SD)	Sexualized/Self-Defeating (n = 14) Mean (SD)	Hypotheses	t(df)	p	r
Social phobia disorder	09 (28)	01 (12)	11 (32)	09 (29)	04 (19)	00 (00)	−1 −1 4 0 −1 −1 / I > H > C,E,ED,S	1.60(47.04)	0.06	0.23
Major depressive disorder	28 (45)	17 (38)	34 (48)	50 (51)	54 (51)	36 (50)	−2 −2 3 −4 3 2 / I,ED > S > C,E>H	0.80(104.00)	0.22	0.08
Substance abuse disorder	13 (33)	41 (50)	23 (42)	17 (38)	14 (36)	79 (43)	−3 3 0 −4 1 3 / E,S > ED > I > C > H	5.85(37.68)	<0.001	0.69
General anxiety disorder	19 (39)	01 (12)	05 (21)	15 (21)	07 (26)	14 (36)	−1 −5 3 1 1 1 / I > H,ED,S > C > E	1.48(87.84)	0.07	0.16
Avoidant personality disorder	09 (28)	03 (16)	23 (42)	04 (21)	11 (32)	07 (27)	−1 0 4 −1 −1 −1 / I > E > C,H,ED,S	2.19(53.59)	0.02	0.28
Borderline personality disorder	19 (40)	16 (37)	07 (26)	09 (29)	54 (51)	50 (52)	−3 1 1 −5 3 3 / ED,S > E,I > C,H	4.17(36.63)	<0.001	0.57
Antisocial personality disorder	04 (20)	21 (41)	05 (21)	00 (00)	00 (00)	00 (00)	−3 3 1 −5 1 3 / E,S > I,ED > C > H	3.69(93.56)	<0.001	0.36

C indicates control; E, externalizing; ED, emotionally dysregulated; H, high functioning; I, inhibited; R, reactive; S, sexualized/self-defeating.

Results

The sample of ACOAs (N = 349) was 47.6% male with an average age of 41.14 (11.1) years. The sample was 79.4% white, 8.4% Hispanic, and 7.8% African-American, with 11.4% considered poor, 39.8% working class, 30.6% middle class, and 15.6% upper class. The comparison sample (n = 266) was 42.8% male with an average age of 41.8 (11.6) years. The comparison sample was 80.8% white, 4.5% Hispanic, and 9.4% African-American, with 3.8% considered poor, 20.7% working class, 44% middle class, and 26.3% upper class. The respondents (27.9% psychiatrists) were highly experienced, with a mean of 18.1 (7.8) years of posttraining experience.

Identifying Personality-Based Subgroups

To identify the potential subgroups of patients based on personality profiles, we once again used Q-factor analysis and followed standard factor-analytic procedures, which identified five subgroups (Q-factors). We report here the ULS solution with Promax (oblique) rotation, which accounted for 41% of the variance (18%, 10.7%, 5.5%, 3.7%, and 2.8% for each Q-factor, respectively). The median correlation among the factors was r = 0.04. Table 4 shows the items most characteristic of each subgroup. We labeled the Q-factors using the terms *Inhibited*, *High-functioning*, *Externalizing*, *Emotionally Dysregulated*, and *Reactive/Somatizing*.

Patients who matched the Inhibited subtype were characterized by their tendency to be passive, self-conscious, depressed, and ashamed and to feel inadequate, guilty, anxious, and uncomfortable in social situations. Patients who matched the High-functioning subgroup were articulate, conscientious, energetic, creative, and empathic. Externalizing adults tended to abuse drugs/alcohol; to act impulsively; to take advantage of others; and to be manipulative, critical, deceitful, and angry. Emotionally Dysregulated adults had many BPD features, notably a tendency for emotions to spiral out of control, a tendency to have difficulty in soothing themselves, and a tendency to have problems with identity and impulsivity. Finally, Reactive/Somatizing adults tended to exhibit physical and emotional reactivity to interpersonal slights and conflicts. They develop somatic symptoms in response to stress; ruminate on relational problems; react severely to slights or insults; hold grudges; and tend to be critical, controlling, anxious, and angry.

Validating the Personality Subtypes

We tested the validity of the subtypes through examining their external correlates using contrast analysis and correlational analysis. All analyses were identical to those used in study 1. Table 5 presents the correlations between the personality subtypes and axes I and II comorbidity. Treated categorically, the rates of axis I disorders between personality subtypes differed significantly on three of the four disorders we tested. The disorders were chosen because of their high frequency in COAs as found in previous research. The Emotionally Dysregulated and Reactive/Somatizing adults had the highest rates of major depression. The Externalizing subtype had the lowest rates of major depression and the highest rates of substance abuse disorder. Adults matching the Inhibited prototype had the highest rates of generalized anxiety disorder. For axis II pathology, the Inhibited subtype had the highest rates of avoidant personality disorder, the Emotionally Dysregulated adults had the highest rates of BPD, the Externalizing adults had the highest rates of antisocial personality disorder, and the High-functioning group had the lowest rates of all the personality disorders tested.

Table 6 presents the correlations between the personality subtypes (treated dimensionally) and composite measures of adaptive functioning. Both the Externalizing and Emotionally Dysregulated dimensions were associated with poor adaptive functioning. The High-functioning dimension was associated with high adaptive functioning

TABLE 3. Relation Between Adult Personality Subtypes and Adaptive Functioning and Etiological Variables

	Control (n = 262) Mean (SD)	Externalizing/ Angry (n = 76) Mean (SD)	Inhibited/ Awkward (n = 44) Mean (SD)	Hyperconscientious/ High-Functioning (n = 46), mean (SD)	Emotionally Dysregulated (n = 28) Mean (SD)	Sexualized/ Self-Defeating (n = 14) Mean (SD)	Hypotheses	t(df)	p	r
Adaptive functioning										
Global adaptive functioning	0.08 (0.72)	−0.39 (0.51)	−0.31 (0.49)	0.32 (0.43)	−0.42 (0.68)	−0.15 (0.40)	3 −2 −1 4 −2 −2 H > C > I > E,ED,S	8.18(108.36)	<0.001	0.62
Global psychiatric functioning	−0.02 (0.88)	0.26 (0.93)	0.19 (0.93)	−0.06 (0.89)	0.90 (0.92)	0.39 (0.81)	−3 1 1 −5 3 3 ED,S > E,I > C > H	4.19(464)	<0.001	0.19
Global school functioning	0.16 (0.97)	−0.50 (0.66)	−0.42 (0.68)	0.29 (0.83)	−0.37 (.92)	−0.37 (0.67)	2 −2 −1 5 −2 −2 H > C > I > E,ED,S	5.54(91.69)	<0.001	0.50
Developmental variables										
Adverse childhood environment	3.51 (1.43)	7.08 (2.10)	6.39 (2.14)	5.43 (2.09)	7.11 (2.69)	6.29 (1.64)	−3 1 0 −3 2 3 S > ED > E > I > C,H	6.88(49.20)	<0.001	0.70
Childhood attachment disruption	−0.24 (0.45)	1.09 (0.86)	**0.73** (0.68)	0.55 (0.72)	0.83 (0.91)	0.60 (0.77)	−4 2 0 −4 3 3 S,ED > E > I > C,H	5.60(55.05)	<0.001	0.60
Sexual abuse	1.37 (0.70)	1.68 (0.80)	1.64 (0.84)	1.43 (0.75)	2.14 (0.93)	2.00 (0.96)	−3 0 −1 −3 3 4 S > ED > E > I > C,H	3.61(24.57)	<0.001	0.59
Physical abuse	1.26 (0.60)	2.04 (0.87)	1.80 (0.85)	1.61 (0.86)	1.96 (0.96)	1.57 (0.85)	−3 2 0 −3 2 2 E,ED,S > I,C,H	3.48(64.57)	<0.001	0.40
Childhood psychopathy	−0.11 (0.44)	0.83 (1.09)	0.18 (0.72)	−0.27 (0.22)	−0.09 (0.33)	0.20 (0.79)	−2 3 −1 −2 1 1 E > ED,S > I > C,H	7.01(102.41)	<0.001	0.57
Family history, %										
Anxiety disorders	2.01 (0.74)	1.89 (0.70)	1.98 (0.73)	2.09 (0.69)	2.21 (0.74)	2.43 (0.65)	1 −6 2 1 1 1 I > C,H,ED,S > E	2.20(463)	0.17	0.10
Suicide	1.32 (0.48)	1.57 (0.55)	1.57 (0.63)	1.46 (0.59)	1.39 (0.50)	1.14 (0.36)	−4 1 1 −4 3 3 ED,S > E,I > C,H	−0.64(87.27)	0.26	0.07
Criminality	1.44 (0.62)	2.08 (0.76)	1.89 (0.72)	1.63 (0.71)	2.00 (0.86)	1.71 (0.83)	−6 4 1 −4 2 3 E > S > ED > I > H > C	4.94(463)	<0.001	0.22

Aggregated variables are comprised of the following standardized scores:
a) global adaptive functioning—job losses, social support, quality of general relationships, quality of romantic relationships, employment history, and a 5-point rating of personality health-sickness;
b) global psychiatric functioning—Global Assessment of Functioning score, hospitalizations, and suicide attempts (higher scores reflect more severe psychopathology);
c) adverse childhood environment—relationship with mother, relationship with father, pathology of mother, pathology of father, moves, family stability, family warmth;
d) childhood psychopathy—fire starting, tortures animals, violent arrests, stealing; and
e) childhood attachment disruption—significant separations, foster care, sent to live elsewhere, and living with an alcoholic in the house.
C indicates control; E, externalizing; ED, emotionally dysregulated; H, high functioning; I, inhibited; R, reactive; S, sexualized/self-defeating.

TABLE 4. Empirically Derived Adult Personality Subtypes (*N* = 349)

	Factor Score (SD Units)
Q-Factor 1: Inhibited (*n* = 90)	
Tends to be passive and unassertive.	3.15
Tends to feel s/he is inadequate, inferior, or a failure.	2.81
Has trouble acknowledging or expressing anger toward others, and instead becomes depressed, self-critical, self-punitive, etc. (*i.e.*, turns anger against self).	2.81
Has difficulty acknowledging or expressing anger.	2.53
Tends to be shy or self-conscious in social situations.	2.35
Tends to feel ashamed or embarrassed.	2.34
Tends to feel unhappy, depressed, or despondent.	2.34
Tends to feel guilty (*e.g.*, may blame self or feel responsible for bad things that happen).	2.29
Has trouble making decisions; tends to be indecisive or to vacillate when faced with choices.	2.25
Tends to feel anxious.	2.25
Q-Factor 2: High-Functioning (*n* = 92)	
Is articulate; can express self well in words.	3.54
Tends to be conscientious and responsible.	3.34
Enjoys challenges; takes pleasure in accomplishing things.	2.76
Is able to use his/her talents, abilities, and energy effectively and productively.	2.62
Has a good sense of humor.	2.58
Has moral and ethical standards and strives to live up to them.	2.41
Tends to be liked by other people.	2.31
Is psychologically insightful; is able to understand self and others in subtle and sophisticated ways.	2.27
Tends to be energetic and outgoing.	2.22
Is capable of hearing information that is emotionally threatening (*i.e.*, that challenges cherished beliefs, perceptions, and self-perceptions) and can use and benefit from it.	2.17
Q-Factor 3: Externalizing (*n* = 62)	
Tends to abuse drugs or alcohol.	2.89
Tends to be angry or hostile (whether consciously or unconsciously).	2.75
Tends to act impulsively (*e.g.*, acts without forethought or concern for consequences).	2.55
Tends to get into power struggles.	2.53
Tends to blame own failures or shortcomings on other people or circumstances; attributes his/her difficulties to external factors rather than accepting responsibility for own conduct or choices.	2.32
Has little psychological insight into own motives, behavior, etc.	2.32
Is prone to intense anger, out of proportion to the situation at hand (*e.g.*, has rage episodes).	2.15
Has little empathy; seems unable or unwilling to understand or respond to others' needs or feelings.	2.15
Tends to be manipulative.	2.12
Tends to be conflicted about authority (*e.g.*, may feel that s/he must submit, rebel against, win over, defeat, etc.).	2.05
Q-Factor 4: Emotionally Dysregulated (*n* = 75)	
Emotions tend to spiral out of control, leading to extremes of anxiety, sadness, rage, etc.	3.68
Is prone to painful feelings of emptiness (*e.g.*, may feel lost, bereft, abjectly alone even in the presence of others, etc.).	3.11
Tends to fear s/he will be rejected or abandoned.	2.62
Tends to feel unhappy, depressed, or despondent.	2.57
Emotions tend to change rapidly and unpredictably.	2.43
Is unable to soothe or comfort him/herself without the help of another person (*i.e.*, has difficulty regulating own emotions).	2.33
Lacks a stable sense of who s/he is (e.g., attitudes, values, goals, and feelings about self seem unstable or ever-changing).	2.30
Tends to feel s/he is inadequate, inferior, or a failure.	2.25
Tends to become irrational when strong emotions are stirred up; may show a significant decline from customary level of functioning.	2.19
Repeatedly re-experiences or re-lives a past traumatic event (*e.g.*, has intrusive memories or recurring dreams of the event; is startled or terrified by present events that resemble or symbolize the past event).	1.97
Q-Factor 5: Reactive/Somatizing (*n* = 30)	
Tends to develop somatic symptoms in response to stress or conflict (*e.g.*, headache, backache, abdominal pain, asthma, etc.).	2.91
Tends to hold grudges; may dwell on insults or slights for long periods.	2.77
Tends to be critical of others.	2.62
Tends to feel misunderstood, mistreated, or victimized.	2.25
Tends to ruminate; may dwell on problems, replay conversations in his/her mind, become preoccupied with thoughts about what could have been, etc.	2.16

(Continued on next page)

TABLE 4. *(Continued)*

	Factor Score (SD Units)
Tends to have extreme reactions to perceived slights or criticism (*e.g.*, may react with rage, humiliation, etc.).	2.04
Tends to be controlling.	2.01
When upset, has trouble perceiving both positive and negative qualities in the same person at the same time (*e.g.*, may see others in black or white terms, shift suddenly from seeing someone as caring to seeing him/her as malevolent and intentionally hurtful, etc.).	1.89
Tends to feel anxious.	1.88
Tends to be self-righteous or moralistic.	1.86

and employment. Table 6 also includes data on variables of potential etiological significance (developmental and family history). The Emotionally Dysregulated dimension was associated with a poor childhood environment, sexual and physical abuse, and suicide. The Externalizing dimension was uniquely associated with poor childhood attachment, childhood psychopathy, and a family history of criminality. Overall, the High-functioning dimension was negatively associated with most developmental and familial risk factors.

DISCUSSION

The results corroborate previous research suggesting that COAs are not a homogeneous group. Rather, in both studies, we found five distinct personality patterns in adolescent and adult COAs, four of which showed strong similarities across the two age groups. The subtypes identified were similar to but nonoverlapping with personality subtypes previously identified in previous work using the SWAP (Westen and Shedler, 2007; Westen et al., 2005). The emergence of nonoverlapping subtypes with significantly different external correlates than a comparison group supports the implication that these personality subtypes are unique to adolescent and adult COAs.

Among adolescents, the first subtype is Angry/Externalizing. These adolescents show psychopathic features such as taking advantage of others, expressing little empathy, and appearing impervious to consequences. These characteristics have been associated with conduct

problems at a younger age of onset (Wootton et al., 1997). The patients who matched this profile also tended to be deceitful, manipulative, angry, impulsive, and critical. As expected, these adolescents showed significantly higher rates of substance abuse disorder and antisocial personality disorder. In addition, the adolescents who matched this prototype showed poor global adaptive functioning; poor school functioning; an adverse childhood environment, childhood attachment disruption, physical abuse, and childhood psychopathy; and a family history of criminality. The antisocial and delinquent nature of adolescents in this subtype is quite similar to the clinical descriptions of "The Scapegoat" described in Wegscheider (1981).

Adolescents in the Awkward/Inhibited subtype showed social deficits and internalizing problems. These adolescents have a tendency to be passive, avoidant, and depressed and may fear rejection or abandonment. Our hypothesis was supported in that they also showed the highest rates of avoidant personality disorder and poor school functioning. Adolescents in this subtype resemble the "Lost Child" as described by Wegscheider (1981).

The third adolescent personality subtype was Hyperconscientious/High-functioning This subtype includes a range of healthy attributes such as a tendency to be conscientious, responsible, articulate, empathic, and able to respond to humor; however, this group also includes variables associated with negative affectivity, such as a tendency to feel guilty, to be self-critical, and to expect themselves to be perfect.

TABLE 5. Axis I and Axis II Pathology by Personality Subtype (Percentage Meeting DSM-IV Criteria)

	Control (n = 267) Mean (SD)	Inhibited (n = 90) Mean (SD)	High-Functioning (n = 92) Mean (SD)	Externalizing (n = 62) Mean (SD)	Emotionally Dysregulated (n = 75) Mean (SD)	Reactive/ Somatizing (n = 30) Mean (SD)	Hypotheses	t(df)	p	r
Social phobia disorder	10 (30)	13 (34)	03 (18)	03 (18)	05 (23)	10 (31)	−3 5 −3 0 0 1 I > R > ED > E > C,H	1.85(140.96)	0.03	0.15
Major depressive disorder	34 (48)	50 (50)	30 (46)	23 (43)	57 (50)	57 (50)	−1 2 −3 −1 2 1 I,ED > R > C,E > H	5.07(296.83)	<0.001	0.28
Substance abuse disorder	13 (33)	26 (44)	18 (39)	58 (50)	41 (50)	20 (41)	−3 1 −5 4 2 1 E > ED > R,I > C > H	6.38(188.88)	<0.001	0.42
General anxiety disorder	19 (39)	28 (45)	12 (33)	11 (32)	15 (36)	23 (43)	−2 3 −3 −1 2 1 I > ED > R > E > C > H	2.32(290.06)	0.01	0.13
Avoidant personality disorder	10 (31)	29 (46)	10 (30)	02 (13)	07 (25)	07 (25)	−1 7 −3 −1 −1 −1 I > C,E,ED,R > H	4.16(108.70)	<0.001	0.37
Borderline personality disorder	20 (40)	13 (34)	09 (28)	24 (43)	71 (46)	33 (48)	−4 1 −4 1 5 1 ED > I,E,R > C,H	9.49(157.33)	<0.001	0.6
Antisocial personality disorder	04 (19)	01 (12)	01 (10)	48 (50)	05 (23)	07 (25)	−3 −3 −3 6 2 1 E > ED > R > C,I,H	7.35(67.98)	<0.001	0.67

C indicates control; E, externalizing; ED, emotionally dysregulated; H, high functioning; I, inhibited; R, reactive; S, sexualized/self-defeating.

TABLE 6. Relationship Between Adult Personality Subtypes and Adaptive Functioning and Etiological Variables

	Control (n = 267) Mean (SD)	Inhibited (n = 90) Mean (SD)	High-Functioning (n = 92) Mean (SD)	Externalizing (n = 62) Mean (SD)	Emotionally Dysregulated (n = 75) Mean (SD)	Reactive/Somatizing (n = 30) Mean (SD)	Hypotheses	t(df)	p	r
Adaptive functioning										
Global adaptive functioning	0.12 (0.66)	−0.15 (0.52)	0.48 (0.57)	−0.55 (0.52)	−0.47 (0.56)	−0.31 (0.46)	3 −1 5 −3 −3 −1 H > C > I,S > E,ED	14.26(270.26)	<0.001	0.66
Global psychiatric functioning	−0.06 (0.86)	0.15 (0.92)	−0.20 (0.80)	0.21 (0.80)	0.69 (0.95)	0.16 (0.96)	−2 1 −4 1 3 1 ED > E,S,I > C > H	6.67(239.46)	<0.001	0.40
Global employment	3.20 (1.22)	2.91 (1.21)	3.80 (1.09)	2.05 (1.03)	2.43 (1.20)	2.66 (1.11)	3 −5 −3 −3 −1 H > C > S,I > E,ED	10.32(602)	<0.001	0.39
Developmental variables										
Childhood environment	0.18 (0.74)	−0.41 (0.54)	−0.36 (0.59)	−0.41 (0.57)	−0.69 (0.50)	−0.33 (0.43)	3 −1 2 −2 −3 1 C > H > S > I > E > ED	9.10(361.75)	<0.001	0.43
Adverse childhood events	1.03 (1.30)	3.00 (1.57)	2.88 (1.80)	3.61 (1.78)	4.16 (2.18)	2.93 (1.70)	−4 1 −4 2 4 1 ED > E,I,S > H,C	10.00(218.73)	<0.001	0.56
Childhood attachment disruption	−0.21 (0.45)	0.41 (0.59)	0.32 (0.57)	0.75 (0.74)	0.67 (0.70)	0.39 (0.62)	−4 1 −4 3 3 1 E,ED > I,S > C,H	9.74(261.53)	<0.001	0.52
Sexual abuse	0.21 (0.41)	0.28 (0.45)	0.33 (0.47)	0.11 (0.32)	0.55 (0.50)	0.27 (0.45)	−4 2 −4 1 4 1 ED > I > S,E > C,H	2.88(245.65)	0.002	0.18
Physical abuse	0.14 (0.34)	0.38 (0.49)	0.28 (0.45)	0.44 (0.50)	0.56 (0.50)	0.40 (0.50)	−4 1 −4 3 3 1 E,ED > S,I > C,H	6.04(285.68)	<0.001	0.34
Childhood psychopathy	−0.13 (0.25)	−0.05 (0.50)	0.00 (0.80)	1.16 (1.72)	0.04 (0.56)	−0.06 (0.62)	−2 −2 −2 4 1 1 E > ED,S > C,I,H	5.56(70.34)	<0.001	0.55
Family history										
Criminality	1.40 (0.62)	1.51 (0.72)	1.54 (0.69)	1.84 (0.77)	1.72 (0.76)	1.57 (0.82)	−2 −2 −2 4 2 0 E > ED > S > C,I,H	3.58(130.58)	<0.001	0.30
Anxiety disorders	0.22 (0.42)	0.31 (0.47)	0.35 (0.48)	0.26 (0.44)	0.40 (0.49)	0.33 (0.48)	−1 2 −1 −5 2 3 S > ED,I > C,H > E	1.34(111.78)	0.06	0.13
Suicide	0.11 (0.31)	0.12 (0.33)	0.16 (0.37)	0.11 (0.32)	0.33 (0.47)	0.27 (0.45)	−3 1 −3 1 3 1 ED > I,E,S > C,H	2.97(210.50)	0.003	0.20

Aggregated variables comprised of the following standardized scores:
a) global adaptive functioning—job losses, social support, quality of general relationships, quality of romantic relationships, employment history, and a 5-point rating of personality health-sickness;
b) global psychiatric functioning—Global Assessment of Functioning score, hospitalizations, and suicide attempts;
c) adverse childhood environment—relationship with mother, relationship with father, pathology of mother, pathology of father, moves, family stability, family warmth;
d) childhood psychopathy—fire starting, tortures animals, violent arrests, stealing; and
e) childhood attachment disruption—significant separations, foster care, sent to live elsewhere, and living with an alcoholic in the house.
C indicates control; E, externalizing; ED, emotionally dysregulated; H, high functioning; I, inhibited; R, reactive; S, sexualized/self-defeating.

As expected, the Hyperconscientous/High-functioning adolescents were associated with high global adaptive functioning, school functioning, and a negative association with most developmental and familial risk factors.

The fourth subgroup, Emotionally Dysregulated, is strongly reminiscent of BPD and has been identified in other studies of adults and adolescents using the SWAP (Westen et al., 2003). The patients who match this prototype are characterized by intense emotional experiences and relational instability. As expected, these adolescents had high rates of BPD. High loadings on this factor were also associated with poor global adaptive functioning, suicide attempts and hospitalizations, an adverse childhood environment, and physical and sexual abuse.

The last adolescent subtype was Sexualized/Self-defeating. Those in this subtype tend to abuse alcohol and to act promiscuously and sexually seductive while becoming quickly attached in abusive relationships, acting impulsively and engaging in thrill-seeking behaviors, and engaging in self-mutilating behavior. As expected, these adolescents showed high rates of substance abuse disorder and BPD and were more likely to have been sexually abused.

Study 2 examined personality subtypes in a separate adult sample. Four of the five subtypes seem to be adult analogues of the adolescent subtypes. The first subtype, Inhibited, is similar to the Awkward/Inhibited adolescents, characterized by passive and constricted behaviors with feelings of guilt, depression, and anxiety. As expected, these adults had the highest rates of generalized anxiety disorder.

The High-functioning adults were similar to the Hyperconscientious/High-functioning adolescents, showing healthy attributes such as a tendency to be conscientious, responsible, and empathic. The pathological features of guilt and perfectionism found in the adolescent subtype appear less frequently in the adult subtype. A possible hypothesis for this change might be that adults were able to work out some of their conflicts from adolescence by no longer living with the alcoholic parent. As expected, high loadings on the High-functioning Q-factor was associated with high global adaptive functioning and employment and negatively associated with most developmental and familial risk factors.

The Externalizing adult subtype is very similar to the adolescent Angry/Externalizing subtype, with psychopathic features and a tendency to abuse alcohol. These adults fit the model of children of alcoholics who themselves become alcoholics. As expected, the extent to which patients matched this dimension predicted poor adaptive functioning, poor childhood attachment, childhood psychopathy, and a family history of criminality.

The Emotionally Dysregulated subgroup is almost identical to the adolescent Emotionally Dysregulated subtype. Emotionally Dysregulated adults had the highest rates of major depression and BPD. High loadings on this Q-factor were associated with poor adaptive functioning, a poor childhood environment, sexual and physical abuse, and suicide, all of which have been found to be associated with BPD (Zanarini, 1997).

Finally, those in the Reactive/Somatizing subtype tended to be sensitive and reactive to interpersonal conflicts; to develop somatic symptoms in response to stress; to ruminate on problems; to hold grudges; and to be critical, controlling, anxious, and angry. These adults also showed a significantly high rate of major depression. These adults diverged from the adolescent Sexualized/Self-defeating subtype. One hypothesis would be that some of the histrionic aspects of the adolescent subtype were expressed in adults through somatic symptoms. However, this hypothesis is speculative and deserves further research.

Limitations

The study has several limitations. First, the patients were included as part of a study of adolescent and adult personality pathology, and those with an alcoholic parent were identified by clinician report. A more accurate method to identify COAs would involve administering an assessment measure to the parent (*i.e.*, SCID-II) to determine the clinical levels of alcohol use. However, clinicians knew their patients for, on average, 20 weeks, those who worked with adolescents are likely to have known the parents, and clinicians followed a highly conservative decision rule in answering developmental history questions, namely to check "absent" unless they were "certain." Therefore, our control groups were more likely to contain false negatives than our COA groups were to include false positives. Furthermore, most of the previous research has been based on self-reports of parental alcohol use, which are unlikely to be more reliable. With respect to the representativeness of the sample, the identification of a high-functioning subgroup in both populations suggests that clinicians did indeed follow our directions to select patients with any degree of personality pathology, from relatively mild to relatively severe, although the percentage of high-functioning patients in nonpatient samples would likely be higher. Future research should attempt to replicate these findings using broader samples and better validated measures of parental substance use and abuse.

Second, we relied on a single informant (the treating clinician), which could potentially have led to biases in patient descriptions, although the fact that we found subtypes unknown to clinician-informants and the fact that they predicted external criterion variables in predictable ways mitigate the extent to which such biases could have influenced the results. Nevertheless, future research should rely on data from multiple informants.

Third, relying on clinician reports prohibited the collection of other important types of data, including laboratory measures of impulsivity or effortful control, neuroimaging data, or molecular genetic variables that might distinguish the groups (*e.g.*, dopamine transporter gene, serotonin transporter gene, monoamine oxidase A). Therefore, using a direct interview method in future research would allow for easier access to external correlates beyond those studied here.

Implications

Children of alcoholics are a heterogeneous, not homogeneous, group. Although we cannot assume that parental alcoholism causes the identified subtypes, we can assume that research investigating COAs as a homogeneous group is inappropriate given that the heterogeneity is not random. It seems advisable to include personality subtyping in all research on children of alcoholics, given the clear heterogeneity within and across disorders that can be accounted for by them. A sample that mixes emotionally dysregulated, psychopathic, inhibited, and high-functioning adolescents and adults is likely to yield findings that are difficult to generalize and may offset each other to show null findings (*e.g.*, inhibited and psychopathic). The data presented here also have clinical implications in pointing clinicians to different personality patterns that they are likely to encounter when working with adolescent and adult COAs.

REFERENCES

American Psychiatric Association (1994) *Diagnostic and statistical manual of mental disorders*. Washington, DC: American Psychiatric Association.

Achenbach, T (1991) *Manual for the Child Behavior Checklist*. Burlington, VA: University of Vermont.

Baker DE, Stephenson LA (1995) Personality characteristics of adult children of alcoholics. *J Clin Psychol*. 51:694–702.

Black C (1979) Children of alcoholics. *Alcohol Res Health*. 4:23–27.

Blais M, Norman D (1997) A psychometric evaluation of the DSM-IV personality disorder criteria. *J Pers Disord*. 11:168–176.

Carpenter DR (1995) Adult children of alcoholics: CAQ profiles. *Alcohol Treat Q*. 13:63–70.

Coleman RL, Frick PJ (1994) MMPI-2 profiles of adult children of alcoholics. *J Clin Psychol*. 50:446–454.

D'Andrea LM, Fisher GL, Harrison TC (1994) Cluster analysis of adult children of alcoholics. *Int J Addict*. 29:565–582.

DeFife JA, Drill R, Nakash O, Westen D (2010) Agreement between clinician and patient ratings of adaptive functioning and developmental history [published online ahead of print July 15, 2010]. *Am J Psychiatry*. doi: 10.1176/appi.ajp.2010.09101489.

Devine C, Braithwaite V (1993) The survival roles of children of alcoholics: Their measurement and validity. *Addictions*. 88:69–78.

Dutra L, Campbell L, Westen D (2004) Quantifying clinical judgment in the assessment of adolescent psychopathology: Reliability, validity, and factor structure of the Child Behavior Checklist for Clinician-Report. *J Clin Psychol*. 60:65–85.

Fisher GL, Jenkins SJ, Harrison TC, Jesch K (1992) Personality characteristics of adult children of alcoholics, other adults from dysfunctional families, and adults from nondysfunctional families. *Int J Addict*. 28:477–485.

Hilsenroth M, Ackerman S, Blagys M, Baumann B, Baity M, Smith S, Holdwick D (2000) Reliability and validity of DSM-IV Axis V. *Am J Psychiatry*. 157:1858–1863.

Horn J (1965) An empirical comparison of methods for estimating factor scores. *Educ Psychol Meas*. 25:313–322.

Lease SH (2002) A model of depression in adult children of alcoholics and nonalcoholics. *J Counsel Dev*. 80:441–451.

Mathew RJ, Wilson WH, Blazer DG, George LK (1993) Psychiatric disorders in adult children of alcoholics: Data from the epidemiologic catchment area project. *Am J Psychiatry*. 150:793–800.

McGue M (1997) A behavioral-genetic perspective on children of alcoholics. *Alcohol Res Health*. 21:210–17.

Morey L (1988) Personality disorders in DSM-III and DSM-III-R: Convergence, coverage, and internal consistency. *Am J Psychiatry*. 145:573–577.

Nakash-Eisikovits O, Dutra L, Westen D (2002) Relationship between attachment patterns and personality pathology in adolescents. *J Am Acad Child Adolesc Psychiatry*. 41:1111–1123.

Obot IS, Wagner FA, Anthony JC (2001) Early onset and recent drug use among children of parents with alcohol problems: Data from a national epidemiologic survey. *Drug Alcohol Depend*. 65:1–8.

O'Connor B (2000) SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behav Res Meth Instrum Comput*. 32:396–402.

Potter-Efron RT (1990). Differential diagnosis of physiological psychiatric and sociocultural conditions associated with aggression and substance abuse. In RT Potter-Efron, PS Potter-Efron (Eds), *Aggression, family violence and chemical dependency*. New York: The Haworth Press, Inc.

Prescott C, Kendler K (1999) Genetic and environmental contributions to alcohol abuse and dependence in a population-based sample of male twins. *Am J Psychiatry*. 156:34–40.

Rhodes J, Blackham G (1987) Differences in character roles between adolescents from alcoholic and nonalcoholic homes. *Am J Drug Alcohol Abuse*. 13:145–155.

Roebuck TM, Mattson S, Riley EP (1999) Behavioral and psychosocial profiles of alcohol-exposed children. *Alcohol Clin Exp Res*. 23:1070–1076.

Rosenthal R, Rosnow R, Rubin D (1999) *Contrasts and effect sizes in behavioral research: A correlational approach*. Cambridge, UK: Cambridge University Press.

Shedler J, Westen D (2004a) Dimensions of personality pathology: An alternative to the five-factor model. *Am J Psychiatry*. 161:1743–1754.

Shedler J, Westen D (2004b) Refining personality disorder diagnosis: Integrating science and practice. *Am J Psychiatry*. 161:1350–1365.

Sher KJ (Ed) (1991) *Psychological characteristics of children of alcoholics: Overview of research methods and findings. Recent developments in alcoholism*. New York: Plenum Press.

Sher KJ (1997) Psychological characteristics of children of alcoholics. *Alcohol Res Health*. 21:247–255.

Stinson FS, Grant BF, Dawson DA, Ruan WJ, Huang B, Saha T (2005) Comorbidity between DSM-IV alcohol and specific drug use disorders in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Drug Alcohol Depend*. 80:105–116.

Wegscheider S (1981) *Another chance: Hope and health for the alcoholic family*. Palo Alto, CA: Science and Behavior Books.

Westen D, Harnden-Fischer J (2001) Personality profiles in eating disorders: Rethinking the distinction between Axis I and Axis II. *Am J Psychiatry*. 165:547–562.

Westen D, Muderrisoglu S (2003) Reliability and validity of personality disorder assessment using a systematic clinical interview: Evaluating an alternative to structured interviews. *J Pers Disord*. 17:350–368.

Westen D, Muderrisoglu S, Fowler C, Shedler J, Koren D (1997) Affect regulation and affective experience: Individual differences, group differences, and measurement using a Q-sort procedure. *J Consult Clin Psychol*. 65:429–439.

Westen D, Shedler J (1999a) Revising and assessing Axis II, Part 1: Developing a clinically and empirically valid assessment method. *Am J Psychiatry*. 156:258–272.

Westen D, Shedler J (1999b) Revising and assessing Axis II, Part 2: Toward an empirically based and clinically useful classification of personality disorders. *Am J Psychiatry*. 156:273–285.

Westen D, Shedler J (2007) Personality diagnosis with the Shedler-Westen Assessment Procedure (SWAP): Integrating clinical and statistical measurement and prediction. *J Abnorm Psychol*. 116:810–822.

Westen D, Dutra L, Shedler J (2005) Assessing adolescent personality pathology: Quantifying clinical judgment. *Br J Psychiatry*. 186:227–238.

Westen D, Shedler J, Durrett C, Glass S, Martens A (2003) Personality diagnosis in adolescence: DSM-IV Axis II diagnoses and an empirically derived alternative. *J Psychiatry*. 160:952–966.

Westen D, Weinberger J (2004) When clinical description becomes statistical prediction. *Am Psychol*. 59:595–613.

Wilkinson-Ryan T, Westen D (2000) Identity disturbance in borderline personality disorder: An empirical investigation. *Am J Psychiatry*. 157:528–541.

Windle M (1990) A longitudinal study of antisocial behaviors in early adolescence as predictors of late adolescent substance use: Gender and ethnic group differences. *J Abnorm Psychol*. 99:86–91.

Wootton J, Frick P, Shelton K, Silverthorn P (1997) Ineffective parenting and childhood conduct problems: The moderating role of callous-unemotional traits. *J Consult Clin Psychol*. 65:301–308.

Zanarini MC (1997) Pathways to the development of borderline personality disorder. *J Pers Disord*. 11:93–101.

Zittel C, Westen D (2005) Borderline personality disorder as seen in clinical practice: Implications for DSM-V. *Am J Psychiatry*. 162:867–875.