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A Control Profile of Adult Children of Alcoholics: A Preliminary Investigation

Deane H. Shapiro Jr., Ph.D.

Department of Psychiatry and Human Behavior
California College of Medicine
University of California–Irvine
Irvine, California

Vicki Weatherford, Ph.D.

Department of Psychiatry and Human Behavior
California College of Medicine
University of California–Irvine
Irvine, California

Department of Psychiatry
Kaiser Permanente Medical Center
Vallejo, California

Edward Kaufman, M.D.

Department of Psychiatry and Human Behavior
California College of Medicine
University of California–Irvine
Irvine, California

Capistrano by the Sea Hospital
Dana Point, California

Robert E. Broenen, Ph.D.

John F. Kennedy University
Cupertino, California

ABSTRACT

In order to more precisely investigate the nature of control and self-control issues for adult children of alcoholics (ACA), a group of ACAs was compared to a group of sex and age matched healthy normals and a sex matched group of college students on the Shapiro Control Inventory (SCI). The SCI provides a profile that is both general domain (positive sense of control, desire/efforts for control, agency of control, and mode of control) and domain specific (body, mind, interpersonal, self, career, environment). Analysis of variance and subsequent planned comparisons on the SCI showed significant differences between the ACA and the two comparison groups in general domain sense of control, in three of the four general domain mode quadrants, and in the domain specific areas of body, mind, interpersonal, and career. Individual areas where ACA subjects felt most out of control were weight, significant other, and family of origin; 89.5% felt concern with self-concept, stress, and relationship with significant other. Although a small subset of ACAs had a strikingly high "in control" profile, most did not. Finally, the sense of control profile of ACAs is compared with two clinical populations—borderline and depression—and is shown to fall midway between the clinical and normative groups. Guidelines and suggestions for further research are offered.

INTRODUCTION

The past 25 years have seen a plethora of literature dealing with the importance of control and self-control for clinical problems (1–3). During that time, it has become increasingly recognized that the literature on control is quite complex (4, 5). For example, a distinction has now been made between generalized control expectancies (internal/external locus of control) as first identified by Rotter (6, 7) and individual control beliefs as detailed by Bandura's self-efficacy theory (8–10). Further, external control has been found orthogonal to internal control (11) and two types of external control identified: powerful other and chance (12). Finally, there have been refinements in agent and object; desire for control has been distinguished from locus of control (13, 14); different modes of control, primary and secondary (15) as well as individual specific and culture specific responses to control-related issues, have been identified; and the importance and higher validity of domain specific data have been discovered (16, 17). To address these issues, a third generation of control test inventory, the Shapiro Control Inventory (SCI) was developed. Previous studies have used this inventory to refine and more precisely measure the construct of control in both a general and domain specific way. Both reliability and validity measures with the instrument have been undertaken with a variety of clinical and normative populations (cf. Refs. 18 and 19; see Refs. 20 and 21 for summaries).

Clinical and anecdotal evidence has suggested that issues of control and self-control are also critical variables for adult children of alcoholics. This current study attempts to extend the work of the SCI by applying it to a population of adult children of alcoholics (ACA) in order to begin the development of a more precise profile of that population. This seems particularly warranted because, although ACAs have been targeted as an at-risk population (22), there is very little empirical literature on prevention programs (23). Therefore, further basic research seems necessary as a first step in order to be able to subsequently more clearly target and specify prevention programs. These control issues include the need to dominate and control in general, and issues of control in relationships in particular (24), including problems of intimacy and trust (62.1% of ACAs reported intimacy problems versus 40.5% in a comparison group) (25). Fear of losing control is seen as an ACA characteristic (24, 26) as well as low self-esteem (27, 28; see Ref. 29 for a summary). Based on this previous literature of ACA and control, the following main hypotheses were decided upon.

SCI: General Domain Sense of Control involved four hypotheses based on the four scales: 1) The ACA group will have a significantly lower positive sense of control than the comparison groups; 2) The ACA group will have a significantly higher negative sense of control than the comparison groups; 3) The ACA group will have a significantly higher overall sense of control (combining the positive and negative scales) than the comparison groups; 4) The ACA group will have a significantly higher desire for control (and fear of losing control) than the comparison groups.

SCI: General Domain Mode of Control involved four hypotheses based on the four quadrants: 5) The ACA group will have a significantly lower positive assertive mode of control (quadrant one) than the comparison groups; 6) The ACA group will have a significantly lower positive yielding mode of control (quadrant two) than the comparison groups; 7) The ACA group will have a significantly higher negative assertive mode of control (quadrant three) than the comparison groups; 8) The ACA group will have a significantly higher negative yielding mode of control (quadrant four) than the comparison groups.

SCI: Domain Specific Sense of Control involved two hypotheses based on overall domain specific sense of control and specific areas: 9) The ACA group will have an overall lower mean sense of control score on the domain-specific items than the comparison groups; 10) The ACA group will have significantly higher control problems related to issues of interpersonal relationships and self-esteem than the comparison groups.

METHOD

Subjects and Setting

ACA subjects were part of the Weatherford and Kaufman research program on adult children of alcoholics and were recruited by word of mouth and announcement. To be recruited into the study, at least one parent needed to be an alcoholic, and the individual needed to score 6 or higher on the Children of Alcoholics Screening Test (CAST) (30). The mean CAST score was 19.7 ($\pm$ 5.5). The mean score on the Marlowe-Crowne Social Desirability Scale was 12.5 ($\pm$ 5.4), which suggests a candid, honest questionnaire response style by the ACA subjects.

Nineteen of the above subjects are included in the current study, 15 women (78.9%) and 4 men (21.9%); mean age 41.9 years (SD 8.72). The majority were Caucasian (89.5%); 94.7% were college graduates; 42.1% said they had no religion, and the rest belonged to a monotheistic religion. Twenty-six percent were single, 31.6% married, and 31.6% divorced.

Comparison Groups. Two comparison groups were used in this study, one a group of psychiatrically screened health normals and one a group of unscreened college students.

Psychiatrically screened normals: This population was recruited from a list of normal control volunteers who had previously participated in research at the University of California Irvine Medical Center (UCI). Those admitting to past or current psychiatric illness, based on a 15-item normal screening assessment, were excluded from the group. The sex ratio and ages of this group were selected so as to approximate the sex ratio and ages of the ACA group. Mean age was 39.1 (SD 9.7); of the 14 subjects, 5 (35.7%) were male and 9 (64.3%) female. Pearson chi-square showed no significant differences on age or sex between the healthy normals and the ACA groups. In terms of other demographics, all were Caucasian, all high school graduates and 71.4% college graduates, 21.4% said they had no religion, 50% monotheistic religion, and the rest other. Fifty percent were married, 21.4% single, and 28.6% divorced.

Unscreened college students: This population was recruited from an undergraduate class on environmental psychology at UCI. Of the 67 subjects, 17 (25.4%) were male and 50 (74.6%) female. The average age was 20.9 (SD 3.7). There were no significant differences between this group and the others on sex ratio, but, as expected, there were age differences (Pearson chi-square value 80.1; $df = 2$; $p = .0000$). All were high school graduates, 40.3% were

Asian, 40.3% were Caucasian, 29.8% said they had no religion, 49.3% belonged to a monotheistic religion (Protestant, Catholic, Jewish), and there were 3 Buddhists. Ninety-four percent were single, the rest married.

SCI Inventory

The SCI is an inventory designed to provide a multifaceted general domain and domain-specific profile of an individual (31).

General Domain: Sense of Control. There are four general domain scales based on a 7-point Likert rating. Discriminate functional analysis and jackknifed classification have shown that these scales predict normal and clinical populations twice as effectively as the Rotter (6) and Wallston combined (32). These four scales are as follows: (1) positive sense of control consists of 11 items measuring perceived self-efficacy, ability to set meaningful goals, skills to carry out the goals, and appropriate level of self-control. The alpha reliability of the scale is .89. (2) Negative sense of control consists of 5 items measuring loss of control, lack of control, control from others, and has an alpha reliability of .70. (3) Overall sense of control scale combined the above two scales (reversing the negative) consists of 16 items and has an alpha reliability of .89. (4) The desire/efforts for control scale contains 11 items including desire to control self, desire to control other, the importance of the appearance of being in control, and the fear of losing control. It has an alpha reliability of .76.

General Domain: Mode of Control. The mode of control inventory consists of 49 words reflecting four different quadrants: positive assertive, positive yielding, negative assertive, negative yielding (Table 1). Only words which had a minimum of 83.3% agreement between six experts were included. The rater reliability and factor analytic studies describing the quadrants have been detailed elsewhere (18, 19). Research has shown that the quadrants are orthogonal, and that as a result of counseling (cognitive/behavioral), individuals can increase their scores on *both* quadrants one and two (33).

Subjects describe themselves on a four-point Likert-type scale (describes me not well at all to describes me exceedingly well). Quadrant one (positive assertive) is a scale measuring an individual's self-description in terms of ability to alter the environment, others, and oneself, and includes words like "decisive," "communicating needs," and "leading." The alpha reliability for quadrant one is .88. Quadrant two (positive yielding) involves knowing when a sense of control

Table 1. A Four-Quadrant Model of Control

Quadrant One: Active control Positive assertive	Quadrant Two: Letting-go control Positive yielding Accepting
Quandrant Three: Overcontrol Negative assertive	Quadrant Four: Too little control Negative yielding

needs to come from letting go, trusting, and accepting, and words include "patient," "trusting," and "accepting" (alpha reliability is .77). Quadrant three (negative assertive) involves too much active control and words include "manipulating," "overcontrolling," and "dogmatic" (alpha reliability is .82). Quadrant four (negative yielding) involves too little control, and words include "indecisive," "manipulated," and "timid" (alpha reliability is .70).

Specific Domain: Sense of Control. Finally, the SCI contains a domain specific 6-point likert scale consisting of 25 items. Three pieces of information are assessed: (a) whether certain areas of an individual's life are in or out of control; (b) whether those areas are a concern; and (c) for those items which were a concern, what the preferred mode of control was for addressing it (alter, change strategy, or yielding, accepting strategy). There domains assessed are body (which includes such items as eating behavior, physical exercise), mind (which includes such items as thoughts, attention, as well as emotions: sadness, stress), interpersonal (which includes items of friends, significant other, family of origin), career (which includes items of employment situation, work habits), self, environment, and other (which includes items of alcohol consumption, drug usage, gambling, violent behavior).

Data Analysis

Between group data analysis for the scales are based on ANOVA between the three groups and, where significance occurs, subsequent Tukey at the $p = .05$ level. In addition, because the purpose of this study is a preliminary investigation, some data analysis is based on general group aggregate descriptive statistics

Table 2. SCI General Domain Sense of Control Scales (7-point Likert Scale)

	Populations		
	Normal healthy (N = 14)	ACA (N = 19)	College unscreened (N = 67)
Overall*** (general domain items)	5.59 (0.42)	4.58 (1.15)	5.30 (0.70)
Positive control**	5.68 (0.45)	4.68 (1.31)	5.37 (0.73)
Negative control**	2.60 (0.57)	3.61 (1.12)	2.85 (0.85)
Desire for control (N.S.)	4.66 (0.74)	4.94 (0.92)	4.80 (0.78)

*p = <.05.
**p = <.01.
***p = <.001.

within the ACA group as well as data from two subjects on the extremes (high and low).

RESULTS

General Domain: Sense of Control (Hypotheses 1–4). ANOVA and subsequent Tukey showed that the ACA population had a significantly lower positive sense of control (f = 6.76, df = 2,99, p = .0018), a significantly higher negative sense of control (f = 6.96, df = 2,99, p = .0015), and a significantly lower overall sense of control (f = 8.16, df = 2,99, p = .0005) than the two comparison groups. As can be seen from Table 2, although the desire/efforts for control scale findings were not significant, they were in the expected direction, with the ACA population having the highest score of the three groups. Therefore, Hypotheses 1–3 are confirmed, and Hypothesis 4 is not confirmed, but is in the expected direction.

General Domain: Mode of Control (Hypotheses 5–8). ANOVA revealed significant between group differences for all four quadrants: quadrant one (positive assertive): (f = 3.26, df = −2,99, p = .042), quadrant two (positive yielding) (f = 3.72, df = 2,99, p = .027), quadrant three (negative assertive) (f = 3.15,

Table 3. SCI General Domain Mode of Control: Four Quadrants (4-point Likert Scale)

	Populations		
	Normal healthy (N = 14)	ACA (N = 19)	College unscreened (N = 67)
Quadrant One,* positive assertive:			
Mean	2.90	2.46	2.63
SD	(0.55)	(0.67)	(0.46)
Quadrant Two,* positive yielding:			
Mean	2.67	2.34	2.66
SD	(0.54)	(0.64)	(0.41)
Quadrant Three,* negative assertive:			
Mean	1.79	2.20	1.92
SD	(0.48)	(0.66)	(0.46)
Quadrant Four,* negative yielding:			
Mean	1.50	1.91	1.86
SD	(0.42)	(0.69)	(0.53)

*p = <.05.

df = 2,99, p = .0469), and quadrant four (negative yielding) (f = 3.32, df = 2,92, p = .0401). Subsequent Tukey showed ACA's quadrant one was significantly lower than the healthy normals and ACA's quadrant two score was significantly lower than the college unscreened group. As can be seen from Table 3, of the three groups, the ACA group had the lowest quadrant one (positive assertive) and quadrant two (positive yielding) scores, and the highest quadrant three (negative assertive) and quadrant four (negative yielding) scores. Therefore, Hypotheses 5–8 are confirmed.

Specific Domain: Sense of Control (Hypotheses 9 and 10). Based on an ANOVA and subsequent Tukey of overall summation of the 25 specific items, the ACA group felt significantly less in control than the two comparison groups (f = 13.87, df = 2,99, p = .0000). Therefore, Hypothesis 9 is confirmed.

ANOVA and subsequent Tukey also showed significant differences between the ACA and comparison groups in the interpersonal (f = 21.27, df = 2,99, p = .0000) and self (f = 15.50, df = 2,99, p = .0000). Therefore, Hypothesis 10 is confirmed.

In addition, as can be seen from Table 4, there were also significant group differences in the body (f = 16.70, df = 2,99, p = .0000), career (f = 8.765,

Table 4. Domain-Specific Sense of Control (6-point Likert Scale)

	Populations		
	Normal healthy (N = 14)	ACA (N = 19)	College unscreened (N = 67)
Overall****	5.02 (0.49)	4.08 (0.98)	4.83 (0.46)
Body****	4.68 (1.26)	3.36 (1.54)	4.70 (0.67)
Mind*	4.84 (0.77)	3.99 (1.26)	4.37 (0.88)
Interpersonal****	4.96 (0.88)	3.50 (1.37)	4.91 (0.67)
Self****	5.30 (1.59)	3.53 (1.54)	4.90 (0.90)
Career***	5.17 (0.83)	3.98 (1.49)	4.88 (0.70)
Environment (N.S.)	4.71 (1.49)	4.69 (1.53)	4.69) (1.25)
Other (N.S.)	5.48 (0.48)	5.28 (0.56)	5.21 (1.01)

*p = <.05.
**p = <.01.
***p = <.001.
****p = <.0001.

df = 2,99, p = .0003), and mind (f = 3.26, df = 2,99, p = 0.427) areas, but not in the environment and "other" (alcohol, drugs, smoking, violent behavior, or gambling).

Finally, looking specifically at items of concern within the ACA group, the seven areas where subjects felt most out of control on the 6-point Likert Scale were, in order (number in parenthesis is the percent of subjects expressing concern in this area): weight 2.79 (84.2), significant other 2.95 (89.5), exercise 2.95 (84.2), eating behavior 3.11 (68.9), family of origin 3.26 (68.9), stress 3.31 (89.5), sexuality 3.42 (68.9), and the way I feel about myself 3.53 (89.5). By contrast, this group felt quite in control of drug usage— 5.90—with 15.8% expressing concern, and alcohol consumption—5.74—with 21.1% expressing concern.

Agency of Control. Although not a formal hypothesis, a question of interest was the source or agent from which ACAs most frequently gained their sense of control. In terms of between group comparisons, the ACA's score was lowest of the three groups for self being the agent ($f = 4.86$, $df = 2,99$, $p = .0097$) and for "family and friends" being the agent ($f = 9.50$, $df = 2,99$, $p = .0002$). In terms of within group comparison, the ACA group felt their sense of control came significantly more frequently from self-efforts rather than other efforts ($z = -1.68$ Wilcoxon matched pairs ranked sign test, $p = .046$). When other efforts were involved, they were most frequently from God/higher power, followed by family/friends, and finally from government/society.

DISCUSSION

It is clear from this study that control is a variable which differentiated this sample of ACAs from the normal comparison groups on the sense of control scales, the mode of control scales, and the domain specific areas of self and interpersonal. Further, previous research has shown that ACAs have trouble with trust, expressing feelings, and developing intimate relationships (29). This study offers some additional confirmation of that view, with 89.5% of the subjects stating that relationships with significant others is a concern.

This section further examines two questions of importance regarding ACAs: what is the relationship between ACAs and clinical populations on the dimension of control, and how homogeneous is the ACA population's control profile. Finally, suggestions and guidelines for future research regarding ACAs and control are suggested.

Relationship to Clinical Populations

Although ACA is not a DSM-III-R category, this study and others suggest that the familial background puts a large portion of ACAs at risk. Interestingly, when the ACA control profile is compared to other clinical populations studied with the SCI, the ACA population falls midway between normals and other clinical groups (32) as can be seen from Fig. 1 ($f = 27.40$, $df = 6,246$, $p = .0000$). The ACA is not only significantly different from health normals and college unscreened, as shown in this study, but also from the depressed patients of the above study.

There are at least three possible explanations for this. One is that ACAs in general are an at-risk population between normals and clinical populations. Nine

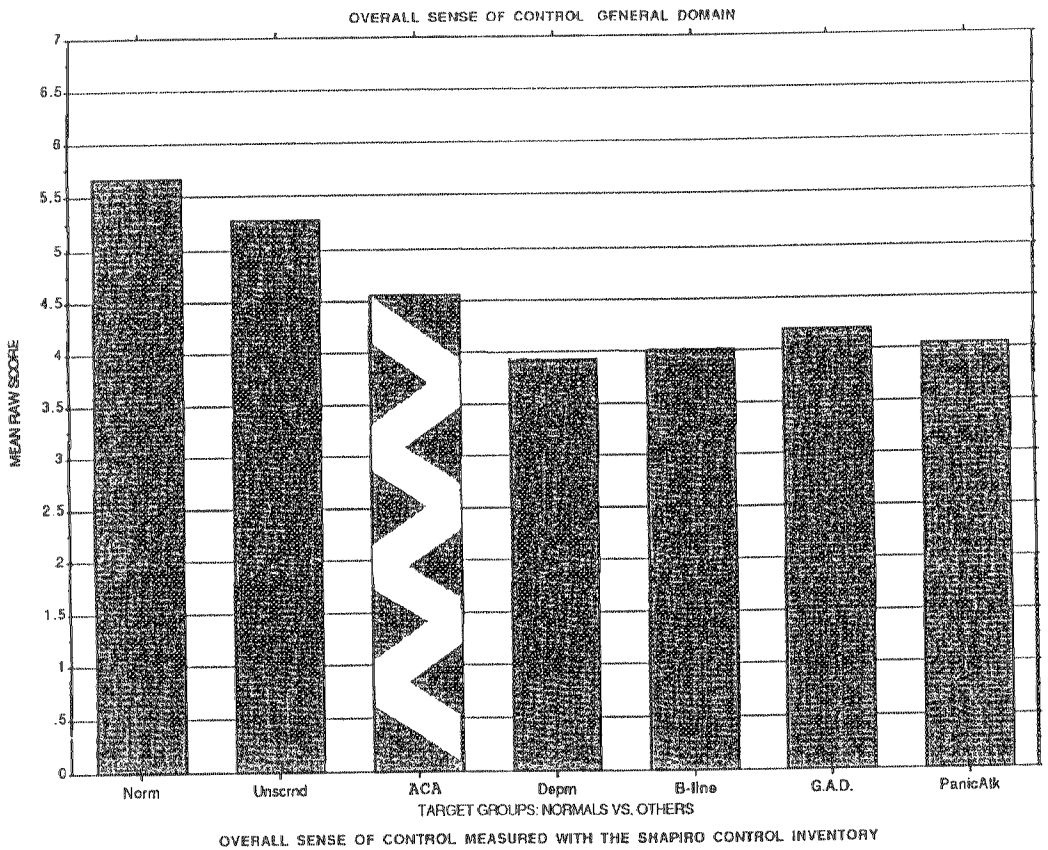

Fig. 1. Adult children of alcoholics versus other groups, sense of control.

(47.4%) of the subjects in the current study had a past alcohol/drug problem, 37% were sexually molested by a parent, and 21% were physically abused by a parent. A second is that ACAs comprise several subgroups, one of which is at risk (reflected by the nearly 74% in this group that had at least one DSM Axis 2 disorder) and one of which is not. Therefore, the mean score on sense of control could reflect a melding of these two subgroups (normal and with Axis 2 disorder). The third possibility is that since 53% of this ACA sample had been in therapy in the past or were in therapy at the time of the study, this study is noting "progress" from the clinical realm toward "normalcy" on the dimension of control.

It would be helpful in future research to delineate "purer" ACA groups: i.e., with/without DSM Axis 2 disorder, in therapy, and never having been in therapy, to determine more precisely answers to the questions regarding sense of control and well-being. A larger, more diversified sample of ACAs would be helpful to not only replicate and validate the findings of this study, but to refine and extend it.

Homogeneity of ACA Population?

Previous clinical and anecdotal literature on adult children of alcoholics have suggested that ACAs as a group have an extremely high need for control and feel quite anxious if they are not controlling every situation. This need for control influences many if not most of their actions (22, 34). The interpretation of this finding in terms of psychological well-being is somewhat conflicting. One school suggests that although the high functioning of ACAs is attributed to the need to maintain a sense of control in a dysfunctional environment, "all children of alcoholics will eventually become dysfunctional" (22) because defenses adopted in childhood will not work well in adulthood. However, Burk and Sher have noted that this all-inclusive view seems premature and may even do a disservice to well-functioning ACAs (23, p. 286), and that rather than the need for control being a negative, they argue, citing Taylor, that the "ability to maintain an optimistic outlook and to develop a set of illusions that convinced them of their control of events over which they had ostensibly little control" might be a healthy buffer for ACAs.

The data from this study suggest a more complex picture. On the one hand, although the ACAs in this sample had the highest desire for control score (4.94), it was not significantly higher than the normals (4.66) and is lower than borderlines desire for control (5.42) and those with generalized anxiety (5.16) (32). In addition,

Table 5. Individual Differences. Two Highest and Lowest Subjects: Some Comparisons

Overall specific domain score: 6 point. Twenty-five item domain score mean	Individual items on general domain sense of control scale, 7 point				
	Positive sense of control	Desire for control	Effort for control	Agency of control (highest score)	Fear of losing control
A 5.92, female	7	7	1	7 (self)	1
B 5.60, male	7	1	1	7 (self), 7 (God)	1
C 2.64, female	2	2	5	6 (family/friend), 6 (God)	6
D 2.52, female	2	5	2	3 (self)	4

the ACA group in this study had the highest score for the following: "I have too much self-control" (f = 3.22, df = 2,92, p = .0443), "I want to let go of control" (f = 10.89, df = 2,99, p = .0001), "I am too aggressive and overcontrolling" (N.S.), and "I hold my anger in even when I want to express it" (N.S.). Thus, this ACA group at least appeared to be sensitive to these issues of overcontrol.

Further, an exploration of individual differences provides further evidence that both the above views regarding control may be too simplistic. Looking at those individuals with the two highest specific domain scores (based on a 6-point scale) (5.92 and 5.60) and those with the two lowest (2.52 and 2.66) is illustrative.

As can be seen from Table 5, the two subjects with the highest domain specific scores (5.92 and 5.66) both said they "always" (7) felt a positive sense of control in their life and never (1) made great efforts to stay in control. Yet their desire scores were quite different, with subject A always having a desire to be in control and never wanting to let go of control, and subject B never having a desire to be in control and sometimes wanting to let go of control. Further, subject A's agency for sense of control always came from self and never from others; she listed her religion as none. Subject B's sense of control also "always" came from self *and*, in contradistinction to subject A, his sense of control also "always" came from a higher power. He listed his religion as Catholic. Similar individual variation can be seen with those with the two lowest scores. For example, although both feel they rarely have a positive sense of control in their life, their desire for control and their efforts are nearly opposite.

Interestingly, neither of the two subjects with the highest sense of control scores had ever been in therapy nor did they have any Axis 2 diagnoses, whereas the two subjects with the lowest scores had been in therapy and both were given an Axis 2 diagnosis.

SUMMARY AND FUTURE DIRECTIONS

The data from this study show that sense of control can differentiate the comparison groups from an ACA population. However, the data also show that broad generalizations about control and ACAs may be misleading, and that there appears to be a range of responses. A small subset of ACAs had a strikingly high "in control" profile, but most did not.

The results from this preliminary investigation therefore show that just as more precision is needed regarding the construct of control, so too more precision is needed to clarify imprecise generalizations about the nature of the control profile of adult children of alcoholics. Previous research on alcoholism and control has shown that most alcoholic samples show significantly more internal scores than Rotter's (6) norms. This study suggests that a forced choice response between internal and external on general domain items (Rotter) may not provide sufficiently precise data. Not only does this study show that individuals can gain a sense of control both from an internal (self) and external (other) agency, but also the process (effort, desire) and mode are important control-related areas to investigate. Further, previous research has shown that domain specific information, in addition to general domain information, is important (9). One advantage of including the SCI in future studies of ACA populations is that it can provide this additional information.

It has been suggested that ACAs are a potentially vulnerable population, and therefore should be the target of preventive efforts (23). This study suggests that ACAs can be differentiated from a normal population on the variable of sense of control. Further, the ACA control profile appears to be an interesting one, falling between normal and clinical. The construct of control may be an important variable in helping to determine whether all ACAs or only a subset of ACAs is at risk. It would be interesting to do a prospective study to see if certain control profiles buffer some individuals from risk (psychiatric, alcohol abuse, dysfunctional relationships). Further, for those who enter treatment programs, it would be interesting to see how their control profile changes pre- to posttreatment. For example, since AA treatment programs involve both self and other control (higher power) (35, p. 74), it could determine the change in sense of control over time and the agency (self, other) for that sense of control. Finally, the development of a control profile has the possibility of not only identifying at-risk ACAs, but also of laying the groundwork for subsequent control-related interventions of both a preventive and rehabilitative nature.

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