

The Personality Characteristics of
Depressed or Alcoholic Adult Children of Alcoholics

by

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BY

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in partial fulfillment of the requirements of the degree of

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Abstract

Winokur (1987) suggested that in an alcoholic family, alcohol abuse and depression among adult children of alcoholics (ACOAs) may be two ways of expressing the same propensity. While Winokur's hypothesis has gained some support, there is little research characterising this propensity. This study examined Winokur's hypothesis using 987 18 to 64 year old male and female participants of a general population survey in an attempt to identify the commonalities connecting alcoholic and depressed ACOAs. It was hypothesized that Winokur's "propensity" could be characterised as a construct of personality variables, specifically, low self-esteem, high neuroticism, and high psychoticism. While Winokur's hypothesis seemed to gain some support, i.e., alcoholic and depressed ACOAs had similar scores on the three personality variables, no differences were seen between alcoholic or depressed subjects across family history groups.

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The Personality Characteristics of Depressed or Alcoholic Adult Children of Alcoholics

Although the number of alcoholics that exist in any population can only be an approximation, the Addictions Research Foundation (1992) estimates that for every 100,000 Canadians there are 1,800 alcoholics (1.8% of the population), while a Health and Welfare Canada Promotion Survey (1985) approximated that 600,000 Canadians over the age of 15 are addicted to alcohol. For the purposes of this paper, of primary importance are the adult children of these alcoholic Canadians. Unfortunately Canadian statistics have yet to uncover how many adult Canadians are estimated to have a family history of alcoholism. For comparison however, Blum and Payne (1991) note that, while over 15 million American adults are either alcohol dependent or alcohol abusers, there exist approximately 30 million Americans who have at least one alcoholic parent.

While the rates and severity of alcoholism and other drug abuse associated with adult children of alcoholics (ACOAs) have been well documented (Cotton, 1979; Goodwin, 1979; Perkins & Berkowitz, 1991; Schuckit, 1986; Svanum & McAdoo, 1991), comparatively less is known about the effects of familial alcoholism on the self-esteem, socialisation, and anxiety level of ACOAs, and whether these effects differ according to the offspring's gender. The consequences of parental alcoholism for the personality characteristics of adult children are of concern since researchers have linked

low self-esteem, high psychoticism (an acceptance of societal norms), and high neuroticism scores (an indication of anxiety) with clinical depression (Workman & Beer, 1989) and alcoholism (Duggan, Lee, & Murray, 1990; Lewis, 1984), especially among adult children of alcoholics (Behar, Winokur, Van Valkenburg, & Lowry, 1980; Sher, Walitzer, Wood, & Brent, 1991; Winokur, 1983; Workman & Beer, 1992).

Family History and Offspring Alcoholism and Depression

Self-Esteem. Rosenberg (1965) described self-esteem as a positive self-attitude, having respect for oneself, considering oneself worthy, and being self satisfied. Low self-esteem individuals are more likely to appear depressed and report higher proportions of psychosomatic symptoms and physiological indicators of anxiety. Individuals with a normal or high self-esteem do not think that they are better than others, but simply that they are 'good enough' (Rosenberg, 1965). The findings on the self-esteem level of young children (under age 18) of alcoholics compared to young children of nonalcoholic parents seem to be somewhat inconsistent. While Clair and Genest (1987) and Churchill, Broida, and Nicholson (1990) found no differences in the self-esteem scores of young children of alcoholics (COA) compared to children of nonalcoholics, others have found young COAs to have lower self-esteem and poorer self-concepts than children from nonalcoholic homes (e.g., O'Gorman, 1975; Rearden and Markwell, 1989). In a

longitudinal study of adolescent COAs, Werner (1986) found that self-esteem consistently emerged as a good predictor of those who did or did not develop serious coping problems in adolescence.

In contrast, the literature relating self-esteem to adult children of alcoholics has consistently shown a significant relationship. Domenico and Windle (1993), for example, in their sample of 616 female ACOAs and adult children of nonalcoholics, found that ACOAs indicated higher levels of depression and lower levels of self-esteem than the adult offspring of nonalcoholics. While there was no difference in the level of alcohol consumption, ACOAs were more likely to drink to relieve tension than were subjects from nonalcoholic homes. In an examination of a measure used to identify adult children of alcoholics, Gondolf and Ackerman (1993) found the index was most highly correlated with indices for mild depression and low self-esteem.

Since self-esteem is generally defined as feeling worthy and self-satisfied, it seems logical that individuals with low self-esteem should be more likely to exhibit symptoms of depression. Indeed, in a sample of 167 college students, 30% of which reported at least mild dysphoria, depressed mood states were strongly associated with low self-esteem (Wong & Whitaker, 1993). Similarly, Russo, Green, and Knight (1993) found, in a sample of 1,034 female and 914 male undergraduates, that high levels of self-esteem

were associated with reduced symptoms of depression. This relationship seemed to occur to a greater degree for the female subjects. Silverstone (1991) examined the self-esteem levels of 141 psychiatric patients with various DSM-III-R disorders. While all of the diagnostic groups had lower self-esteem scores than the normal population, subjects diagnosed with depression had lower self-esteem than all but one of the other groups (personality disorder subjects scored lowest). Finally, studies examining treatments for depression tend to find that an increase in self-esteem is associated with decreases in depression symptomatology (e.g., Maynard, 1993).

The link between self-esteem and alcoholism is also strongly supported (e.g., Beckman & Bardsley, 1981; Gross & Adler, 1970; Rosenberg, 1965; Sandahl, Lindberg, & Bergman, 1987). Researchers such as Labouvie (1987; Labouvie & McGee, 1986) have postulated that, since those with a weak ego are more likely to use emotion-focused coping rather than problem-focused coping, as the desire to reduce the effects of stressful situations increases, people with low self-esteem may be more likely to use alcohol as a coping mechanism. Indeed, while examining the reasons for alcohol use among a group of alcoholic incest survivors, Hurley (1990) found that subjects perceived alcohol as, among other things, a means of increasing their self-esteem.

Neuroticism. Eysenck, Eysenck, and Barrett (1985) have

defined neuroticism as the behaviour of one who is anxious, frequently worrying, moody, and often depressed. In general, neuroticism is defined as a lack of emotional stability.

There is an abundance of literature supporting the relationships between neuroticism and depression (e.g., Benson & Heller, 1987; Eysenck et al., 1985; Gossop & Eysenck, 1980; Knowles & Schroeder, 1990), and between depression and familial alcoholism (e.g., Cadoret & Winokur, 1972; Weissman & Myers, 1980). Furthermore, the relationship among these three (neuroticism, depression, and parental alcoholism) appears to be not only strong, but intertwined. Basically, persons who have elevated neuroticism scores tend to be (a) more susceptible to feelings of depression, and (b) overrepresented among ACOAs. For example, Benson and Heller (1987) found that daughters of problem drinking fathers were more neurotic than daughters of non-problem drinking fathers, with the highest levels of depression and neuroticism found in daughters who had two alcoholic or problem drinking parents. Knowles and Schroeder (1990), using the Wiggins content analysis scales, found that male college students with an alcoholic family history had higher depression scores than male students with no such history. Compared with children of recovered alcoholics and nonalcoholic parents, Moos and Billings (1982) found that children of relapsed alcoholic parents

were more depressed and anxious, while children of recovered alcoholics had depression and anxiety scores similar to those of nonalcoholic parents. While Tweed and Ryff (1991), studying 112 ACOAs and 125 adults from nonalcoholic families, found no difference between the groups on self-esteem scores, they did find that ACOAs scored higher on both depression and anxiety scales.

Although the connection between familial alcoholism, neuroticism, and depression has been noted empirically, the link between these three was not well developed until 1983 by George Winokur when he proposed that ACOAs may exhibit either depression or alcoholism, and that these behaviours are similar consequences of having an alcoholic parent. In his conceptualisation of depression spectrum disease (DSD), the "spectrum" refers to the alcoholic family. DSD differs from other types of depression (such as pure or sporadic) in the symptoms it exhibits. Those with DSD have been described as having neurotic symptoms whereas those with other forms of depression tend to manifest endogenous or psychotic symptoms (Behar et al., 1980; Van Valkenburg, Lowry, Winokur, & Cadoret, 1977). Neurotic symptoms are identified as unstable personality characteristics which include being demanding, overly sensitive, needing reassurance, nervous, complaining, irritable, shy, phobic, dependent, and exhibiting low self-esteem (Behar et al., 1980). In a study of 1,450 clinically depressed female

psychiatric patients, Behar et al. (1980) found that not only did patients with an alcoholic family have twice the number of unstable personality traits, but they also had the highest level of neuroticism when compared to depressed patients with no familial alcoholism.

Winokur's concept of DSD has received some empirical support. Workman and Beer (1992) found that, in a sample of 105 high school students, adolescents from alcoholic homes were significantly more depressed on the Beck Depression Scale than those from nonalcoholic homes. Similarly, Williams and Corrigan (1992), studying 139 undergraduate students, found that ACOAs had greater depression scores, lower self-esteem scores and more social anxiety than adult children of nonalcoholics.

Not unlike self-esteem, the literature demonstrating a relationship between neuroticism and alcohol use is abundant and strongly supported. As early as 1945 Jellinek reported that alcohol could be used to relieve tension. Similarly, Conger (1956) found that alcohol can become a conditioned reinforcer because of its ability to reduce tension. Indeed, in a group of in-treatment alcoholics with elevated fear and trait anxiety scores, Stravynski, Lamontagne, and Lavalley (1986) found that 82% of the subjects reported their alcohol abuse began after their anxiety disorder, and 40% had used alcohol to relieve their emotional stress. Even Gossop and Eysenck (1980) describe their Addiction Scale as

primarily an analysis of items from the Eysenck Personality Questionnaire Neuroticism scale with items related to anxiety and depression. Others (e.g., Calaycay & Altman, 1985; Ogden, Dundas, & Bhal, 1989) have also found strong support for the connection between alcohol abuse and high neuroticism scores on various personality tests such as the 16PF (see Ross, 1971) and the Taylor Manifest Anxiety Scale (see Belfer, Shader, Carroll, & Harmatz, 1971).

Psychoticism. Eysenck, Eysenck, and Barrett (1985) describe psychoticism as a reflection of aggressiveness and hostility, nonconformity, atypical attitudes that indicate a lack of socialisation, impulsivity, low frustration tolerance, and low harm avoidance. Eysenck and Eysenck (1975) define an individual scoring high on their psychoticism scale as being aggressive, cold, impulsive, solitary, cruel, egocentric, antisocial, unempathic, erratic, and tough-minded. The extreme high scorer could be described as having antisocial personality disorder. As are most personality traits, psychoticism seems to be stable. Indeed, Kammeier, Hoffman, and Loper (1973) found that the Psychopathic Deviance Scale (of the MMPI) scores of alcoholics were more stable longitudinally than those scales measuring other personality variables.

Various studies have reported high levels of anti-social characteristics among adult children of alcoholics (e.g., Sher, Walitzer, Wood, & Brent, 1991). Indeed,

Hesselbrock, Hesselbrock, and Stabenau (1985) reported that anti-social personality disorder occurred in 71% of their alcoholic sample with two alcoholic parents, and 50% in those with one alcoholic parent. In a study of 7,064 military men, Frances, Timm, and Bucky (1980) showed similar results. Alcoholics with a positive family history had more severe alcohol symptoms and more anti-social behaviour than those alcoholics with no parental alcoholism.

A link between psychoticism and depression seems well established in the literature (e.g., Lewis, 1984; Stabenau, 1990). Investigating whether a depressed mood induction procedure would raise subjects' level of neuroticism, Bradley, Mogg, Perrett, and Galbraith (1993) discovered that, while their hypothesis was not supported, the procedure did raise subjects' psychoticism scores. In their examination of Eysenck's personality dimensions and suicide attempts, Lolas, Gomez, and Suarez (1991) found that the psychoticism dimension was the most highly related to reported feelings of hopelessness, suicide ideation, and number of previous attempts. There are however, discrepancies in the literature on this relationship. Pearson (1993) for example, found no support for a relationship between psychoticism and depression in his sample of 53 elderly female psychiatric patients.

The link between anti-social personality disorder (an extreme of psychoticism) and alcoholism has been well

established and strongly supported. For example, controlling for the possible age differences typically found between alcoholics and controls, Rankin, Stockwell, and Hodgson (1982) found that alcoholics scored higher on the Eysenck Personality Questionnaire Psychoticism Scale than did controls. Screening 412 male and female subjects who were presenting for psychiatric assessment for anti-social personality disorder, Lewis, Rice, and Helzer (1983) observed significantly higher percentages of alcoholism among anti-social personality patients than for controls. Mercier, Brochu, Girard, Gravel, Ouellet, and Paré (1992) examined the personality characteristics of 580 male and 132 female in-treatment alcoholics. The authors found that the psychoticism dimension of their personality scale showed the most marked divergence from the general population. Finally, Lewis and Bucholz (1991), in their longitudinal study of 2,572 men and women from a general population survey, found that after controlling for all other independent variables, only gender, anti-social personality, and a family history of alcoholism were associated with alcoholism. By examining the age of incidence the authors concluded that the anti-social behaviour significantly preceded pathological drinking in both men and women.

Gender Differences. The literature suggests that sons of alcoholics may be more inclined toward alcohol abuse, whereas the daughters are more likely to be depressed.

Since alcoholic and depressed people tend to have common personality traits, it is likely that the observed sex difference may be socially mediated. That is, since alcohol use is more socially accepted for males than for females, it is possible that males with low self-esteem, and high psychoticism and neuroticism may be more inclined to engage in dangerous levels of alcohol consumption than will females with similar characteristics. Goodwin (1979) found that male ACOAs may be more prone to alcoholism whereas female ACOAs are more prone to depression. Similarly, Goodwin, Schulsinger, Knop, Mednick, and Guze (1977) and Parker and Harford (1987), while supporting Winokur's DSD theory, have found the depressive effects of parental alcoholism valid only for the daughters of alcoholics. Wagner-Glenn and Parsons (1989), however, in their study of 76 male and 72 female in-treatment alcoholics and 50 male and 51 female controls, found that family history positive groups, in both the alcoholic and the control sample, had more depressive symptoms than the family history negative groups, with no sex differences for any of the groups.

Purpose

Although the literature testing Winokur's hypothesis is scarce, Yanish and Battle (1985) did find that while adolescent depression was not predictive of alcohol use, self-esteem did predict both alcohol abuse and depression. Noting the similarities between the observed personality

characteristics of adult children of alcoholics suffering from alcoholism and those suffering from depression, the purpose of this study is to test Winokur's claim that "within one family, alcoholism and depression co-exist and, in fact, are two ways of expressing the same propensity" (1987, p. 362). This study tested the hypothesis that this propensity is in fact a construct of personality, specifically an aggregate of neuroticism, psychoticism, and low self-esteem. Thus, in a general population sample of individuals who have been grouped according to the presence or absence of a family history of alcoholism, those alcoholic subjects with a family history of alcoholism (FH⁺) should have self-esteem, neuroticism, and psychoticism scores similar to the nonalcoholic FH⁺ subjects who have been treated for depression. Furthermore, it is hypothesized that gender will have a differential effect between these personality characteristics and the outcome of depression or alcoholism. Overall, Winokur's theory suggests that people who are either alcoholic or depressed will share common characteristics. From his general theory are proposed three hypotheses:

Hypotheses

Hypothesis 1

Those FH⁺ subjects with a diagnosis of alcoholism will have significantly higher neuroticism, higher psychoticism, and lower self-esteem scores than those alcoholic subjects

with no history of parental alcoholism.

Hypothesis 2

Those FH+ subjects having been treated for depression will have significantly higher neuroticism, higher psychoticism, and lower self-esteem scores than those family history negative (FH-) subjects who have also been treated for depression.

Hypothesis 3

If gender has a differential effect on the outcomes of alcoholism and depression then the proportion of FH+ males versus females should be greater in the alcoholic group than in the 'treated for depression' group.

Method

Sample

The Winnipeg Health and Drinking Survey was a two year longitudinal survey which examined the personality characteristics associated with alcohol and nicotine consumption in both a general population sample and in a clinical group of alcoholics in treatment. This analysis is concerned only with the data from the general population sample. Subjects were interviewed in waves, with the second wave of interviewing occurring approximately two years after each subject was first interviewed.

Wave 1. The original sample was drawn in 1989 from a random list of 4,000 names given to the researchers from the local medicare administration, the Manitoba Health Services

Commission. In total 2,753 introductory letters were mailed to potential subjects. An attempt to contact respondents by phone followed the letter by one to three weeks. An average of 5 attempts were made to contact each individual (range of 3-11 calls). In total 446 of the original 2,753 could not be found, 336 were ineligible due to: having moved away (n=166), having insufficient command of the english language (n=155), or were currently institutionalised or had died (n=15), and 704 refused. The result was 612 male and 655 female respondents for a total of 1,267 Wave 1 subjects (see Table 1 for the age-sex distribution of subjects).

Table 1

Age and Sex Breakdown of Wave 1 Sample

	Males	Females	Total
	N=612 (48.3%)	N=655 (52.7%)	N=1267
<u>Age (in years)</u>			
18-34	211	247	458
35-49	209	204	413
50-64	192	204	396

The Wave 1 interviews were conducted in the subject's home or occasionally in another location preferred by the

participant. The participants read and signed a consent form before the interview began. For additional information regarding sampling techniques, questionnaire procedures, and subject demographics from the Wave 1 interviews the reader is referred to Murray, Barnes, and Patton (1994).

Wave 2. One and a half years after the date of the first interview, subjects were contacted by phone to confirm their current address and to remind them of the second wave interview which was to occur about six months later. Six months later, approximately 23 to 25 months after the date of the first interview, each subject was again contacted by phone to arrange a date and time for the second wave interview. Of the 1,267 interviewed at Wave 1, 61 could not be located for Wave 2, 8 had since died, 83 had moved out of the city and could not be interviewed, and 128 refused to complete the second wave. In total 987 subjects completed both the first and second wave interviews.

For the purpose of this analysis Wave 2 subjects have been divided into those with a history of parental alcoholism (FH⁺) and those with no such family history (FH⁻) as measured by the parental MAST scale (FMAST, MMAST) using a criterion score of 5 or greater (see Measures section). As can be seen from Table 2 the subjects in each group are similar on most but not all of the demographic variables.

Table 2

Description of Wave 2 Sample

	Positive Family History N= 153	Negative Family History N= 829
<u>Age (years)</u>		
Mean (sd)	37.11 (10.59)	42.48 (13.42)
<u>Gender</u>		
Male	43.1	49.5
Female	56.9	50.5
<u>Education</u>		
Some grade school	1.3	1.4
Grade school	1.3	3.0
Some high school	24.8	17.4
High school	27.5	23.0
Some college	24.2	27.5
University graduate	12.4	18.1
Some post graduate	3.3	3.9
Master's or doctorate	5.2	5.7

(Table 2 continues)

Table 2 continued

	Positive Family History N= 153	Negative Family History N= 829
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<u>Family Income</u>		
Under 10,000	3.4	3.4
10,000 to 19,999	9.7	6.5
20,000 to 34,999	20.7	25.2
35,000 to 49,999	27.6	26.5
Over 50,000	38.6	38.5
<u>Employment Status</u>		
Working full time	64.1	57.2
Working part time	11.8	12.5
Unemployed	7.2	3.3
Student	2.6	5.9
Homemaker	8.5	0.7
Retired	2.6	9.9
Other	3.3	8.2

(Table 2 continues)

Table 2 continued

	Positive Family History N= 153	Negative Family History N= 829
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<u>Religious Preference</u>		
Catholic	30.7	28.4
Protestant	41.2	42.2
Jewish	0.7	3.7
Other	11.1	9.8
None	16.3	15.8
<u>Ethnicity</u>		
White	92.2	94.0
Black	2.0	0.6
Asian	0.7	3.9
Native	3.9	0.8
Other	1.3	0.7
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Note. All frequencies are in percentages except age which is in years.

Of the 987 subjects interviewed at both Time 1 and Time 2, 829 18-64 year old males and females reported no parental alcoholism at time 1, while 153 had one ($n = 144$) or two ($n = 9$) alcoholic parents (see Table 3), with 54 of the 153 having both one or two alcoholic parents and at least one

alcoholic grandparent. Five subjects in total have missing values for the parental MAST. Therefore, of the 987 possible subjects, the analysis was performed on 982 noninstitutionalised adult subjects from the city of Winnipeg.

Table 3

Incidence of Alcoholism and Depression by Familial Alcoholism

Parental Alcoholism (FH+) N= 153	No Parental Alcoholism (FH-) N= 829	Overall N= 982
<u>Treated for Depression</u>		
12 (7.84%)	70 (8.44%)	82 (8.35%)
<u>Alcoholic</u>		
25 (16.34%)	96 (11.58%)	121 (12.32%)
<u>Alcoholic and Treated for Depression</u>		
3 (1.96%)	11 (1.33%)	14 (1.42%)
<u>Neither Alcoholic nor Depressed</u>		
113 (73.86%)	652 (78.65%)	765 (77.90%)

Note. Eligible subjects only were included in analysis.

Measures

Family History. Family history of alcohol abuse was measured by the Short Michigan Alcoholism Screening Test (SMAST; Selzer, Vinokur, & van Rooijen, 1975), which is a brief self-report inventory designed to detect alcoholism, and was adapted to refer to the drinking patterns of subject's biological parents while the subject was growing up. This technique has proven to be reliable and valid in prior research (see Sher & Descutner, 1986). The scale contains 13 items, each of which are weighted one point if the subject endorses the alcoholism direction. If either parent scored 5 or greater on the SMAST then the subject was considered to have a positive family history. This cutoff score of 5 has been shown to be empirically valid when using the MAST to assess parental alcohol use (Sher & Descutner, 1986). The SMAST in general has moderately high reliability (around .80) and is correlated highly (greater than .90) with the longer, 25-item MAST (Selzer et al., 1975). Additional items were included to assess the subject's perceptions of possible alcohol problems among other biological relatives including grandparents, aunts and uncles, and siblings.

Alcoholism. Diagnostic classifications based on the Diagnostic and Statistical Manual of Mental Disorders, Third Edition Revised (DSM-III-R; American Psychiatric Association, 1987) can produce a diagnosis of alcohol abuse

or alcohol dependence (mild, moderate or severe). According to the DSM-III-R, alcohol abuse is a pattern of use accompanied by continued use despite knowledge of personal problems caused by this use, recurrent use in hazardous situations, and symptoms that have occurred for at least one month, or have occurred repeatedly in the past. A dependence diagnosis requires at least three of the following:

- (1) greater intake than intended, or use for longer time than intended
- (2) inability to control use
- (3) excessive time spent related to use and recuperation
- (4) neglecting role obligations due to frequent intoxication or withdrawal
- (5) reduction of social activities due to use
- (6) continued use despite persistent or recurrent problems
- (7) marked tolerance to effects
- (8) withdrawal symptoms, and
- (9) use of alcohol to relieve withdrawal.

From these DSM-III-R criteria, dependence would appear to be a more severe manifestation of the disorder than abuse.

In the Winnipeg Health and Drinking Survey a DSM-III-R diagnosis was arrived at using the Diagnostic Interview Schedule items relating to alcohol use (DIS-III-R; Robins,

Helzer, Cottler, & Goldring, 1989). These items from a previous version of the DIS (DIS-III) have a reliability of .80 and above (Erdman, Klein, Greist, Bass, Bires, & Machtinger, 1987; Robins, Helzer, Ratcliff, & Seyfried, 1982). Changes in the substance abuse questions are considered as sufficiently minor by their authors that reliability measures of one are regarded as valid for the other (S.K. Keating, quoted in Murray, Barnes, & Patton, 1994). Current diagnosis then refers to a diagnosis of either abuse or dependence based on symptoms and problems occurring within the year preceding the Wave 2 interview.

Depression. Since the Winnipeg Health and Drinking Survey was originally designed to assess the prevalence of and personality characteristics associated with alcohol and nicotine consumption, no diagnostic measure of subject depression was employed. In an attempt to assess subjects' general health status however, the second wave survey included questions pertaining to the participant's history of being treated for depression. Specifically, each subject was asked if he/she had ever been treated for depression, and if so, when the treatment began, and whether depression was currently a problem.

Self-Esteem. Although the EPQ includes self-esteem as one of the descriptors of the variable neuroticism, self-esteem was assessed independently with the Rosenberg Self-Esteem Inventory (Rosenberg, 1965). A high score on this

scale comprised of 10 Likert items would be indicative of someone with a perception of self-worth and a high degree of self-acceptance. A low score would reveal someone who is self-rejecting and not satisfied with themselves. As is evidenced by its high correlation with other measures of self-esteem, the Rosenberg has been shown to be both an externally valid (see Rosenberg, 1965) and reliable measure of self-esteem (see Diener, Emmons, Larsen, & Griffith, 1985; Goldsmith, 1985). This measure of self-esteem in one study was found to have an internal consistency of $r = .78$ (Westaway & Wolmarans, 1992) and a test - re-test reliability of .85 in another study (Silber and Tippet, cited in Rosenberg, 1965).

Neuroticism. To measure the dependent variable neuroticism, the Neuroticism scale of the self-report Eysenck Personality Questionnaire Revised (EPQR-N; Eysenck, Eysenck, & Barrett, 1985) was used. A high score on the EPQR-N would indicate high emotionality as well as both physical and psychological signs of not coping well with stress. The EPQR-N has been shown to be a reliable measure of trait anxiety as evidenced by high correlations with other scales of anxiety and high emotionality (de Flores, Llorente, Valdes, Torrubia, & Bernardo, 1985; Eysenck et al., 1985). The EPQR-N has an internal consistency reliability of .84 for males and .85 for females. Test - re-test reliability with the effect of sex and age removed

is .86 (Eysenck et al., 1985).

Psychoticism. The dimension of psychoticism was measured using the Eysenck Personality Questionnaire Revised Psychoticism Scale (EPQR-P; Eysenck et al., 1985). Designed to measure anti-social characteristics, the main revision from the 25-item Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1975) was the addition of questions pertaining to impulsivity (previously incorporated in the Extraversion scale). The EPQ-R Psychoticism scale also saw an improvement in its reliabilities and range of scoring. Specifically, the EPQR-P scale has a test - re-test reliability of .78 for males and .76 for females - an improvement from .74 and .68 for males and females, respectively on the EPQ. Although these reliabilities are not as high as those achieved on the Neuroticism scale, the authors note that the P scale is designed to measure several facets of anti-social personality which may hold reliabilities lower than would be true of a more unified scale such as Neuroticism. Secondly, the EPQ-P had a very low range of scoring, which thus gave little room for differentiation (3.78 ± 3.09 for males and 2.63 ± 2.36 for females; Eysenck et al., 1985). The revised scale however has a wider range of scoring, with means of 7.19 ± 4.60 for males and 5.73 ± 3.85 for females. Although the revised scale has shown a slight improvement in its skewness and kurtosis, the change is not significant. Eysenck et al.

(1985) cite two main reasons for the slightly J-shaped distribution. Firstly, the P scale, designed to measure anti-social tendencies, must constitute some departure from normality by reason of the type of items which differentiate high and low P scorers. Secondly, characteristic of high P scorers is uncooperativeness in completing personality questionnaires. Therefore, the majority of people from the general population who complete a P scale are more likely to be low scorers.

Procedure of the Winnipeg Health and Drinking Survey

Wave 1. As previously noted, 2,753 introductory letters were sent to potential participants. For the 1,267 eligible subjects who agreed to participate, an interview in either the subject's home or another location preferred by the subject was arranged. Funds were made available should the subject require a babysitter during the interview. Each subject, after reading and signing the consent form, responded to the Health and Drinking Survey interview, which contained various indices of alcohol consumption patterns, the DSM-III-R, and the parental MAST. Next to be completed was the Participant Self-Administered Questionnaire containing, among other personality indices, the EPQR and the Rosenberg Self-Esteem Inventory. The total time to complete the Wave 1 interview was between one and a half and two hours.

Wave 2. Participants were re-contacted by telephone 23

to 25 months after having completed Wave 1 and asked to complete the Wave 2 interview. As in the first wave, subjects were interviewed in either their home or another preferred location. After reading and signing the consent form each subject completed, as before, the Health and Drinking Survey, then the Participant Questionnaire. The Health and Drinking Survey changed slightly from Wave 1 to Wave 2. The first wave questionnaire assessed parental alcohol use during the subject's childhood and adolescence, while the second wave examined whether or not the subject had ever been treated for depression. Wave 1 interviews therefore were used in this analysis only for the parental MAST scores, since these were not measured in Wave 2 (under the assumption that family history should not change between waves). Since treatment for depression was assessed only in Wave 2, and since subjects' personality is of utmost importance in this analysis, only the second wave scores for subject demographics and the variables of self-esteem, neuroticism, and alcohol use were used, although these were assessed in both waves. At the end of both first and second wave interviews participants were thanked for their participation and given a Winnipeg Health and Drinking Survey coffee cup.

Results

Demographic Variables

While Winokur did not propose that there ought to be a

higher proportion of ACOAs who are alcoholic or depressed than among adult children of nonalcoholics, a X^2 test of the 2 x 2 contingency table was first conducted to determine whether any differences in the proportion of those in each outcome group existed. No significant differences were found either in the proportion of alcoholics ($X^2(1, N = 121) = 0.779$) or depressed subjects ($X^2(1, N = 82) = 0.0$) by family history group.

To control any confounding demographic variables, family history positive subjects were compared to family history negative subjects on all of the variables noted in Table 2. Any significant differences found were then statistically controlled in subsequent analyses. While age differences were not found for alcoholic or depressed subjects across family history groups, FH^+ subjects were on average 5.26 years younger than FH^- subjects ($F(1,967) = 20.50, p < .0001$). Similarly, alcoholic subjects were significantly younger than their depressed counterparts for both the FH^+ ($F(2,153) = 5.17, p < .01$) and the FH^- group ($F(2,814) = 16.14, p < .0001$). Given these observed differences, age was first dichotomized (18-40 years, 41-65 years) using the median (41.0 years) as a dividing age. All subsequent analyses statistically controlled age by entering the age group as an independent variable.

Subjects' levels of education, income and employment were then analysed for differences between family history

groups. The original investigators (see Murray et al., 1994) placed the participants' level of education in one of eight categories: some grade school, completed grade school, some high school, completed high school, some college or a technical diploma, university graduate, some post-graduate work, and, finally, masters or doctorate degree. An examination of each level of education separately revealed no differences between FH⁺ and FH⁻ subjects. Similarly, family income was placed (Murray et al., 1994) into one of five categories: under \$10,000 per annum, \$10,000 - \$20,000, \$20,000 - \$35,000, \$35,000 - \$50,000, and over \$50,000. Again, there were no differences in income between family history groups. Lastly, no differences were found by family history for level of employment which was dichotomized into employed (i.e., working full- or part-time) and other (i.e., unemployed, full-time student, part-time student, homemaker, retired, or other). As well, no significant differences were observed by outcome (alcoholic or depressed), with respect to level of education, income, or employment.

Personality Variables

Using a 2 X 2 factorial analysis of variance (ANOVA) with the effects of age removed, family history positive subjects were compared to family history negative subjects on the three personality variables. As seen in Table 4, FH⁺ subjects had higher neuroticism, higher psychoticism, and

lower self-esteem scores than FH⁻ subjects. In addition, significantly higher psychoticism scores ($F(1,961) = 8.49$, $p < .005$) were observed for the younger group of subjects ($M = 4.51$, $S.D. = 2.95$) compared to the older subjects ($M = 3.76$, $S.D. = 2.42$). Despite the two main effects, there were no interaction effects between age and family history for psychoticism.

Table 4

A Comparison of FH⁺ and FH⁻ Subjects on the Dependent Variables' Mean Scores with the Effects of Age Removed

Dependent Variable	FH ⁺ N = 153	FH ⁻ N = 829	Significance
Neuroticism	12.42 (5.77)	9.96 (5.19)	$F(1,964) = 24.58$, $p = .0001$
Psychoticism	4.49 (2.62)	3.79 (2.75)	$F(1,961) = 7.46$, $p = .0064$
Self-Esteem	32.19 (4.54)	33.28 (4.55)	$F(1,962) = 6.58$, $p = .0105$

Hypothesis 1. Using family history and age as the independent variables in an orthogonal design, analyses of variance were conducted to assess whether FH⁺ alcoholics

differed from FH⁻ alcoholics on measures of psychoticism, neuroticism, and self-esteem. No significant differences were observed for alcoholics across family history groups for any of the three dependent variables (see Table 5).

Table 5

A Comparison of Alcoholic Subjects by Family History on the Dependent Variables' Mean Scores with the Effects of Age Removed

Dependent Variable	FH ⁺ Alcoholic N = 25	FH ⁻ Alcoholic N = 96	Significance
Neuroticism	12.44 (6.76)	10.09 (5.14)	$F(1,119) = 2.23$, $p=.1381$
Psychoticism	4.61 (1.78)	4.79 (2.99)	$F(1,119) = .04$, $p=.8479$
Self-Esteem	30.88 (2.79)	33.31 (4.05)	$F(1,119) = 3.85$, $p=.0522$

Hypothesis 2. Similarly, analyses of variance were completed to determine whether FH⁺ subjects who indicated they had been treated for depression had significantly different scores on the dependent variables than FH⁻ subjects who indicated receiving treatment for depression.

To control possible age effects, age was entered as an independent variable in an orthogonal design. No significant differences were seen across family history groups for any of the dependent variables (see Table 6).

Table 6

A Comparison of Depressed Subjects by Family History on the Dependent Variables' Mean Scores with the Effects of Age Removed

Dependent Variable	FH ⁺ Depressed N = 12	FH ⁻ Depressed N = 70	Significance
Neuroticism	14.88 (6.93)	13.03 (5.10)	$F(1,81) = 1.11,$ $p=.2949$
Psychoticism	5.40 (2.66)	3.94 (2.81)	$F(1,80) = 2.50,$ $p=.1183$
Self-Esteem	30.69 (2.47)	30.75 (5.08)	$F(1,80) = 0.00,$ $p=.9689$

Hypothesis 3. Finally, X^2 tests on the 2 x 2 contingency table were examined for differences in the proportion of males versus females among FH⁺ subjects for each outcome group. Shown in Table 7, males were disproportionately represented in the alcoholic group ($X^2(1,$

$N = 37) = 5.03, p < .05).$

Table 7

A Comparison of the Proportion of FH⁺ Male and Female
Subjects within Each Outcome Group

Outcome Group	Male Subjects N = 22	Female Subjects N = 15
Treated for Depression	4	8
Alcoholic	18	7

Additional Analyses. Analyses were conducted to examine whether Winokur's theory was supported in this population. Winokur stated that there exists some propensity which was common to FH⁺ alcoholic and depressed subjects by virtue of their membership in an alcoholic family. This link was proposed to be absent in nonalcoholic families. Assessing whether this commonality could be a construct of personality, a 2 X 2 factorial ANOVA with the effects of age removed, was completed to examine whether FH⁺ alcoholic subjects had self-esteem, neuroticism, and psychoticism scores similar those of FH⁺ subjects who had been treated for depression. If Winokur's hypothesis were valid for this sample, there would be no observed

differences. Shown in Table 8a, the FH⁺ alcoholic subjects did not differ from their depressed counterparts on any of the dependent variables. Looking at Table 8b however, significant differences can be seen between FH⁻ alcoholic and FH⁻ depressed subjects for neuroticism and self-esteem. The depressed subjects had higher neuroticism and lower self-esteem scores than the FH⁻ alcoholic subjects. Since males were overrepresented in the FH⁻ alcoholic group, while the reverse was true for the FH⁻ depressed group, gender was entered in a 2 X 2 X 2 factorial ANOVA. Removing the effect of gender, lower self-esteem scores remained evident for the depressed subjects. However, there was no difference for neuroticism, while the alcoholic subjects showed significantly higher psychoticism scores (see Table 8c). Upon entering gender as an independent variable in the orthogonal design, an interesting situation became apparent - there was only one older alcoholic FH⁻ female. As this subject may have been an outlier, she was removed, and the analyses redone. Her presence in the data set however, did not make a significant contribution to the results. The statistics shown in Table 8c therefore include this one subject.

Table 8a

A Comparison of FH⁺ Subjects by Outcome on the Dependent Variables' Mean Scores with the Effects of Age Removed

Dependent Variable	FH ⁺ Alcoholic N = 25	FH ⁺ Depressed N = 12	Significance
Neuroticism	12.44 (6.76)	14.88 (6.93)	$F(1,36) = 0.83$ $p = .3684$
Psychoticism	4.61 (1.78)	5.40 (2.66)	$F(1,36) = 0.55$ $p = .4621$
Self-Esteem	30.88 (2.79)	30.69 (2.47)	$F(1,36) = 0.01$ $p = .9101$

Table 8b

A Comparison of FH Subjects by Outcome on the Dependent Variables' Mean Scores with the Effects of Age Removed

Dependent	FH Alcoholic	FH Depressed	
Variable	N = 96	N = 70	Significance
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Neuroticism	10.09 (5.14)	13.03 (5.10)	$F(1,164) = 12.70,$ $p=.0005$
Psychoticism	4.79 (2.99)	3.94 (2.81)	$F(1,163) = 2.93,$ $p=.0891$
Self-Esteem	33.31 (4.05)	30.75 (5.08)	$F(1,163) = 11.75,$ $p=.0008$

Table 8c

A Comparison of FH Subjects by Outcome on the Dependent Variables' Mean Scores with the Effects of Age and Gender Removed

Dependent Variable	FH Alcoholic N = 96	FH Depressed N = 70	Significance
Neuroticism	10.09 (5.14)	13.03 (5.10)	$F(1,164) = 3.32$ $p=.0703$
Psychoticism	4.79 (2.99)	3.94 (2.81)	$F(1,163) = 4.04$, $p=.0461$
Self-Esteem	33.31 (4.05)	30.75 (5.08)	$F(1,163) = 4.37$, $p=.0382$

Discussion

Winokur (1987) hypothesised that both alcohol abuse and depression among adult children of alcoholics are manifestations of a common propensity. In the literature concerning alcohol, adult children of alcoholics tend to be characterised by high levels of neuroticism and psychoticism, and low levels of self-esteem (for review, see Sher et al., 1991; Williams & Corrigan, 1992). Similar high scores on measures of these personality variables also tend to be found among people suffering from depression (e.g.,

Knowles & Schroeder, 1990; Lewis, 1984; Silverstone, 1991), and from alcoholism (e.g., Rankin et al., 1982; Sandahl et al., 1987). Data from the Winnipeg Health and Drinking Survey were analyzed in accordance with Winokur's theory to examine whether alcoholic or depressed adult children of alcoholics (a) share common personality traits with one another, and (b) can be differentiated from alcoholic and depressed children of nonalcoholics on the basis of these personality traits. For Winokur's theory to be fully supported with respect to the three identified personality variables, three conditions needed to be satisfied:

(1). By virtue of belonging to an alcoholic family, FH⁺ subjects should have neuroticism, psychoticism, and self-esteem scores different from those of FH⁻ subjects. In all instances, this was supported by the data. Individuals with a history of parental alcoholism had significantly higher psychoticism, higher neuroticism, and lower self-esteem scores than FH⁻ subjects. These results lend support to similar studies finding lower self-esteem (e.g., Dominico & Windle, 1993), and elevated neuroticism (e.g., Benson & Heller, 1987) and psychoticism (e.g., Hesselbrock et al., 1985) scores among ACOAs compared to adult children of nonalcoholics. Given these results, it would appear that something differentiates FH⁺ individuals from FH⁻ subjects. Furthermore, it would seem that this "something" may be characterised as a construct of personality.

That is not to say that the propensity observed in this analysis is a result of personality differences. Indeed, the observed differences may simply be a manifestation of an underlying condition (e.g., biological differences). As Blum and Payne (1991) and Schuckit (1987) have proposed, it is possible that children of alcoholics may inherit a predisposing condition that exhibits itself through personality traits.

(2). Given that a condition is hypothesized to exist in FH⁺ individuals that is not necessarily present in FH⁻ individuals, FH⁺ alcoholics should not have significantly different psychoticism, neuroticism, and self-esteem than FH⁺ depressed subjects. By contrast however, FH⁻ alcoholics should score differently than FH⁻ depressed individuals on the same three variables. Again, this hypothesis appears to be supported. FH⁺ alcoholic subjects did not differ from their depressed counterparts on any of the personality variables. FH⁻ alcoholic subjects however, upon controlling for gender as well as age, had higher psychoticism and higher self-esteem scores than the FH⁻ depressed subjects. There were no differences on the index of neuroticism between the FH⁻ alcoholic and FH⁻ depressed group.

A note of caution must be made regarding the finding of 'no difference' between FH⁺ alcoholic and FH⁺ depressed subjects. The sample sizes for these two groups were quite small (n=12 depressed and n=25 alcoholic) such that if

differences were present they may not have been detected. Furthermore, there exists an abundant amount of literature relating alcoholism (e.g., Beckman & Bardsley, 1981; Mercier et al., 1992; Stravynski et al., 1986) and depression (Eysenck et al., 1985; Stabenau, 1990; Wong & Whitaker, 1993) to low self-esteem, high neuroticism, and high psychoticism; however there is far less evidence suggesting that alcoholics and depressed people have similar scores on measures of these variables, and that this relationship may exhibit itself to varying degrees depending on familial alcoholism. Therefore, while these data seem to support Winokur's theory, the results must be interpreted with some degree of tentativeness.

(3). Finally, if there exists a common thread binding alcoholic and depressed subjects together by virtue of their family history that is absent in FH⁻ groups, then FH⁺ alcoholics should differ from FH⁻ alcoholics on all three personality variables. Similarly, FH⁺ depressed subjects should have significantly different neuroticism, psychoticism, and self-esteem scores than FH⁻ depressed subjects. The results of this study clearly do not show support for this hypothesis. Research findings supporting similar hypotheses have been few and far between. Behar et al. (1980) found some support for the hypothesis that FH⁺ depressed subjects have higher neuroticism scores than FH⁻ depressed subjects, while Frances et al. (1980) showed that

FH⁺ alcoholic subjects had more antisocial behaviour problems than FH⁻ alcoholics. There seems to be very little support however for any differences across family history groups by outcome (alcoholism or depression) for self-esteem.

This null finding must also be interpreted with caution however, since a power analysis has revealed that the analysis performed, due to small cell sizes, may have been too weak to detect small differences. The power for the tests conducted range from 0% to 52%. One exception is the observance of a slight trend indicating that FH⁺ depressed subjects may have lower self-esteem scores than FH⁻ depressed persons. This observation however failed to reach significance, while the power of the test was 96% ($\alpha=.05$). Given such a powerful test, a true difference would more than likely have been detected.

It is apparent from these findings that Winokur's theory has gained strong support. There indeed appears to exist a relationship between alcoholism, depression, and parental alcoholism. Furthermore, this relationship seems to manifest itself through a construct of personality, specifically, in measures of neuroticism, psychoticism, and self-esteem. However there were simply too few subjects in the family history positive cells to detect important differences that would be necessary to fully support Winokur's claims with respect to the proposed hypotheses.

Conclusion

Studies examining personality differences based on family history have typically focused their efforts on group differences, that is, adult children of alcoholics versus adult children of nonalcoholics, as opposed to differences between subgroups of individuals within a familial alcoholism framework. While this study examined Winokur's theory from a perspective not readily found in the literature, it is important to remember that it is indeed a preliminary study. To gain a better understanding of the relationship between alcoholism and depression within a family of alcoholics, one would need a much larger sample of alcoholic and depressed participants from both family history groups to increase the power of the analyses.

In this study, membership in an alcoholic family was based on each subject's report of his/her parents' alcohol use. While this measure has been shown to be a reliable estimate of parental alcoholism in previous research (see Sher & Descutner, 1986), a more accurate characterisation of family history membership would be obtained by giving the MAST directly to the subjects' parents.

Finally, for these data, it is possible that there exists a group of individuals who have never been treated for depression but would receive a diagnosis of depression on various clinical scales. Conversely, there may have been some individuals who indicated receiving treatment for

depression but were, in fact, not clinically depressed. Therefore, a more clinically based diagnostic tool for assessing depression should be included in future research.

The results of this study suggest that there does indeed exist a propensity which may differentiate subgroups of adult children of alcoholics from individuals with no familial alcoholism. A next step for research in this field to take then is to explore whether this propensity is in fact a construct of personality, or is a manifestation of a more complex phenomenon such as a biological predisposition, exhibiting itself through personality traits. Most theories of personality, Eysenck's included, are biological in basis, mostly focusing on levels of cortical arousal (Zuckerman, 1989). Researchers have for years been looking, with some success, at a genetic marker for alcoholism (e.g., Blum, Noble, Sheridan, Montgomery, Titchie, Jagadeeswaran, Nogami, Briggs, & Cohn, 1990; Schuckit, 1987). It could be proposed that a specific genetic make-up may play a causal role in predisposing one to certain personality traits as well as behavioural manifestations of those traits, such as alcoholism. As well, since adoption studies allow researchers to discover whether children of alcoholics reared with their biological parents manifest these traits to the same extent as those reared apart from their parents, a learning theory paradigm could be an important addition to such a genetic study. As DNA analysis is becoming both a

preferred and accessible form of analysis, such a proposal to examine the both the biological and environmental markers potentially associated with personality as well as the behavioural manifestations of personality is certainly a realistic goal for personality research.

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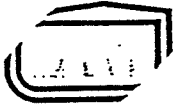
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Appendix A

Wave 1 Introduction Letter



UNIVERSITY OF MANITOBA

WINNIPEG HEALTH AND DRINKING SURVEY
 FACULTY OF HUMAN ECOLOGY
 Department of Family Studies

Room 313D
 Human Ecology Building
 Winnipeg, Manitoba
 Canada R3T 2N2
 (204) 474-9430

Dear

The University of Manitoba, with the support of Health and Welfare Canada, is conducting a study on living patterns and alcohol use by people in Manitoba. Your name has been randomly chosen from all of the residents of the city.

In a few days a caller from the "Winnipeg Health & Drinking Survey" will telephone you, will explain the project in more detail, and will request to interview you. We hope that you will agree to participate. If you decide to participate, your answers are kept confidential, and the results are only reported in statistical form.

Alcohol use is an important factor which affects health in Canada. The federal government has made a large investment in Manitoba for this project, in an effort to get an accurate view of the attitudes and behavior of Manitobans towards drinking. In order to get this accurate view we have to question a broadly representative sample of the population. For the project to be successful it is important that a high percentage of the people we contact agree to participate. It doesn't matter whether you drink or don't drink your participation is important to provide us with the most accurate picture possible. If you have any questions about the research please give us a call.

Sincerely,

A handwritten signature in cursive script, likely belonging to David Patton.

David Patton, M.A.
 Project Manager
 Winnipeg Health & Drinking Survey
 Faculty of Human Ecology
 474-9430

Gordon Barnes, Ph.D.
 Professor
 Department of Family Studies
 Faculty of Human Ecology
 474-8050

Demographics Information

TO COMPLETE OUR BACKGROUND INFORMATION WE NEED TO ASK YOU SOME
QUESTIONS ABOUT YOURSELF.

[INTERVIEWER: CODE MALE OR FEMALE]

M[]

F[]

Could you please tell me your date of birth? ____ / ____ / ____ .
(date) (month) (year)

Please describe the following characteristics about yourself.

1. Current Marital Status:

[INTERVIEWER: IF THE RESPONDENT IS MARRIED, ASK IF THEY HAVE BEEN
PREVIOUSLY DIVORCED?]

Single []

Married or Equivalent []

Widowed []

Divorced or Separated []

Married, but previously
divorced []

2. The following questions are about employment. -

First, which of the categories on this card best describes what
you are now doing?

[INTERVIEWER: USE RESPONDENT CARD CALLED EMPLOYMENT AND CHECK

ONLY ONE: IF RESPONDENT USES MORE THAN ONE WRITE IN THE MARGIN
ON THE RIGHT]

Working full-time	[]
Working part-time	[]
Unemployed & looking for work	[]
Full-time student	[]
Part-time student	[]
Homemaker	[]
Retired	[]
Other (specify)	[]

In your most recent job what is/was your title?

Please describe the main duties or responsibilities of this
position?

3. Educational Status:

What is the highest grade you attended or degree you received?

Some Grade School	[]
Grade School Completed	[]
Some High School	[]
High School Completed	[]
Some College or a Technical Diploma	[]
University Graduate	[]

Some Post-Graduate Work []

Master's Degree or Doctorate []

4. What is your religious preference?

Catholic []

Protestant (Denomination) []

Jewish []

Other (specify)----- []

None []

5. What was your parents' religion?

	Mother's	Father's
Catholic	[]	[]
Protestant (Denomination)	[]	[]
Jewish	[]	[]
Other (specify)-----	[]	[]
None	[]	[]

6. When you were growing up, what was the language used most often in your home?

English []

French []

Ukrainian []

German []

Other (specify)_____ []

7. In what country were you born?

Specify _____

8. To which ethnic or cultural group do you feel you belong?

Specify _____

9. What racial category would you consider yourself?

White []

Black []

Asian []

Native []

Other (Specify) _____ []

10. When your mother was growing up, what was the language used most often in her family's home?

English []

French []

Ukrainian []

German []

Other (Specify) _____ []

11. In what country was your mother born?

Specify _____

12. To which ethnic or cultural group does your mother belong?
(Aside from Canadian)

Specify _____

13. When your father was growing up, what was the language used most often in his family's home?

	English	[]
	French	[]
	Ukrainian	[]
	German	[]
Other	(Specify) _____	[]

14. In what country was your father born?

Specify _____

15. To which ethnic or cultural group does your father belong?
(Aside from Canadian)

Specify _____

16. What was the size of the place where you lived the longest
before you were 16?

In the country on a farm	[]
In the country but not on a farm	[]
Town of lesss than 5,000 people or on a reserve	[]
City of 5,000 to 24,999 people	[]
City of 25,000 to 99,999 people	[]
City of 100,000 to 499,999 people	[]
City of 500,000 to more people	[]
Can't guess (Give the name of place)	[]

17. Please describe the other members of your household besides

yourself.

Relationship to yourself:	Age	Gender		EMPLOYMENT		
		Male	Female	Full-time	Part-time	Not Employed
1. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. So that we can compare this study with the whole population by broad income groups, indicate your income for the past year (that is, total income before taxes, including wages, welfare income, farm income, interest dividends, etc.) of all members of the family presently residing in this household by checking one of these income categories.

Under \$10,000 ☐

\$10,000 - \$20,000 ☐

\$20,000 - \$35,000 ☐

\$35,000 - \$50,000 ☐

over \$50,000[]

Don't Know[]

19. About how many years have you lived in your present home?

Number of years _____

Number of months _____

20. [INTERVIEWER: IF THE RESPONDENT HAS LIVED IN THE PRESENT HOME
LESS THAN 5 YEARS, ASK: "How many times have you moved in the
last five years?"]

Number of times _____

Appendix C

Short Michigan Alcoholism Screening Test - Family

The following questions are about your biological mother's use of alcohol.

- a. Did your mother ever drink alcohol? Yes []₁
No []₂
- b. Do you feel your mother has been a normal drinker? Yes []₁
No []₂
Don't Know []₃
- c. Did your father, grandparent, or other near relative ever complain about your mother's drinking? Yes []₁
No []₂
Don't Know []₃
- d. Did your mother ever feel guilty about her drinking? Yes []₁
No []₂
Don't Know []₃
- e. Did friends and relatives think your mother was a normal drinker? Yes []₁
No []₂
Don't Know []₃
- f. Was your mother able to stop drinking when she wanted to? Yes []₁
No []₂
Don't Know []₃
- g. Has your mother ever attended a meeting of Alcoholics Anonymous (AA)? Yes []₁
No []₂
Don't Know []₃
- h. Has your mother's drinking ever created problems between her and your father or another near relative? Yes []₁
No []₂
Don't Know []₃

- i. Has your mother ever gotten into trouble at work because of drinking? [INTERVIEWER: NOTE IF RESPONDENT'S MOTHER NEVER WORKED]

Yes []₁
No []₂
Don't Know []₃
Never Worked []₄

- j. Has your mother ever neglected her obligations, her family, or her work for 2 or more days in a row because of her drinking?

Yes []₁
No []₂
Don't Know []₃

- k. Has your mother ever gone to anyone for help about her drinking?

Yes []₁
No []₂
Don't Know []₃

- l. Has your mother ever been in a hospital because of drinking?

Yes []₁
No []₂
Don't Know []₃

- m. Has your mother ever been arrested for drunken driving, driving while intoxicated, or driving under the influence of alcoholic beverages? [INTERVIEWER: NOTE IF RESPONDENT'S MOTHER NEVER DROVE]

Yes []₁
No []₂
Don't Know []₃
Never Drove []₄

- n. Has your mother ever been arrested, even for a few hours, because of other drunken behaviour?

Yes []₁
No []₂
Don't Know []₃

- o. Do you think your mother is (was) an alcoholic?

Yes []₁
No []₂
Don't Know []₃

The following questions are about your real (biological) father's use of alcohol.

a. Did your father ever drink alcohol?

Yes []₁
No []₂

b. Do you feel your father has been a normal drinker?

Yes []₁
No []₂
Don't Know []₃

c. Did your mother, grandparent, or other near relative ever complain about your father's drinking?

Yes []₁
No []₂
Don't Know []₃

d. Did your father ever feel guilty about his drinking?

Yes []₁
No []₂
Don't Know []₃

e. Did friends and relatives think your father was a normal drinker?

Yes []₁
No []₂
Don't Know []₃

f. Was your father able to stop drinking when he wanted to?

Yes []₁
No []₂
Don't Know []₃

g. Has your father ever attended a meeting of Alcoholics Anonymous (AA)?

Yes []₁
No []₂
Don't Know []₃

h. Has your father's drinking ever created problems between him and your mother or another near relative?

Yes []₁
No []₂
Don't Know []₃

i. Has your father ever gotten into trouble at work because of drinking?

Yes []₁
No []₂

- j. Has your father ever neglected his obligations, his family, or his work for 2 or more days in a row because of his drinking?

Yes []₁
No []₂
Don't Know []₃

- k. Has your father ever gone to anyone for help about his drinking?

Yes []₁
No []₂
Don't Know []₃

- l. Has your father ever been in a hospital because of drinking?

Yes []₁
No []₂
Don't Know []₃

- m. Has your father ever been arrested for drunken driving, driving while intoxicated, or driving under the influence of alcoholic beverages?

Yes []₁
No []₂
Don't Know []₃

- n. Has your father ever been arrested, even for a few hours, because of other drunken behavior?

Yes []₁
No []₂
Don't Know []₃

- o. Do you think your father is (was) an alcoholic?

Yes []₁
No []₂
Don't Know []₃

Have you ever been treated for Depression?

Yes []₁
No []₂

When did this begin?

AGE

Is it still a problem?

Yes []₁
No []₂

When did it end?

AGE

Diagnostic Interview Schedule (DIS III R)

I am going to ask you more questions about drinking, these questions are related to things that might have happened to you in the past.

never []

sometimes []

often []

nearly always []

1. Have you ever had fits or seizures after stopping or cutting down on drinking?
2. Have you ever taken a drink to keep from having withdrawal symptoms or to make them go away?
3. Have you ever gone on binges or benders where you keep drinking for a couple of days or more without sobering up?
4. When you went on these binges or benders, did you neglect some of your usual responsibilities then?
5. Did you do that several times or go on a binge that lasted a month or more?
6. Did you ever get tolerant to alcohol, that is you needed to drink a lot more in order to get an effect, or found that you could no longer get high on the amount you used to drink?

7. After you have been drinking for a while, did you find that you began to be able to drink a lot more before you would get drunk (before your speech got thick or you were unsteady on your feet)?
8. Did your ability to drink without feeling it last for a month or more?
9. Have there been many days when you drank much more than you expected to when you began, or have you often continued drinking for more days in a row than you intended to?
10. Have you more than once wanted to stop drinking but couldn't?
11. Some people try to control their drinking by making rules, like not drinking before 5 o'clock or never drinking alone. Have you ever made rules like that for yourself?
12. Did you make these rules because you were having trouble limiting the amount you were drinking?
13. Did you try to follow those rules for a month or longer or make rules for yourself several times?
14. Has there ever been a period when you spent so much time drinking alcohol or getting over its effects that you had little time for anything else?
15. Did the period when you spent a lot of time drinking last a month or longer?
16. Have ever given up or greatly reduced important activities

in order to drink ____ like sports, work, or associating with friends or relatives?

17. Did you give up or cut down on activities to drink for a month or more, or several times?

18. Has your drinking or being hung over often kept you from working or taking care of your children?

19. Have you often worked or taken care of children at a time when you had drunk enough alcohol to make your speech thick or to make you unsteady on your feet?

20. How old were you when you first had any wine, beer, or other alcohol at least once a month (for 6 months or more)?

21. What is the largest number of drinks that you've ever had in one day?

_____ yrs ago or _____ months ago

22. When did you last have as much as 20 drinks in one day?

_____ yrs ago

_____ months ago

_____ within the past month

23. Has there ever been a period of two weeks when every day you were drinking at least 7 drinks ---- that could include beers, glasses of wine, or drinks of any kind?

Yes []

No []

24. When did you first have a period of two weeks when you drank at least 7 drinks every day?

_____ yrs ago or _____ months ago

25. When did you last have a period of two weeks when you drank at least 7 drinks every day?

_____ yrs ago or _____ months ago

26. Has there ever been a couple of months or more when at least one evening a week you drank 7 or more drinks or bottles of beer or glasses of wine?

Yes []

No []

27. When was the first time that at least one evening a week you drank 7 or more drinks?

_____ yrs ago or _____ months ago

28. When was the last time that at least one evening a week you drank 7 or more drinks?

_____ yrs ago or _____ months ago

Rosenberg Self-Esteem Inventory

Please read the following statements and indicate how much you agree or disagree with each statement by placing a tick (✓) in the appropriate box.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I feel that I'm a person of worth, at least on equal plane with others.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
2. I feel that I have a number of good qualities.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
3. All in all, I am inclined to feel that I am a failure.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
4. I am able to do things as well as most other people.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
5. I feel I do not have much to be proud of.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
6. I take a positive attitude toward myself.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
7. On the whole, I am satisfied with myself.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
8. I wish I could have more respect for myself.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
9. I certainly feel useless at times.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
10. At times I think I am no good at all.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Instructions: Please answer each question by putting a tick in the box ☒ under the 'YES' or the 'NO' following the question. There are no right or wrong answers, and no trick questions. Work quickly and do not think too long about the exact meaning of the questions.

PLEASE REMEMBER TO ANSWER EACH QUESTION

	Yes	No
1. Do you have many different hobbies?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
2. Do you stop to think things over before doing anything?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
3. Does your mood often go up and down?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
4. Have you ever taken the praise for something you knew someone else had really done?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
5. Do you take much notice of what people think?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
6. Are you a talkative person?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
7. Would being in debt worry you?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
8. Do you ever feel 'just miserable' for no reason?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
9. Do you give money to charities?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
10. Were you ever greedy by helping yourself to more than your share of anything?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
11. Are you rather lively?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
12. Would it upset you a lot to see a child or an animal suffer?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
13. Do you often worry about things you should not have done or said?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
14. Do you dislike people who don't know how to behave themselves?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
15. If you say you will do something, do you always keep your promise no matter how inconvenient it might be?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
16. Can you usually let yourself go and enjoy yourself at a lively party?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
17. Are you an irritable person?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
18. Should people always respect the law?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
19. Have you ever blamed someone for doing something you knew was really your fault?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
20. Do you enjoy meeting new people?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
21. Are good manners very important?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
22. Are your feelings easily hurt?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
23. Are <u>all</u> your habits good and desirable ones?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
24. Do you tend to keep in the background on social occasions?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂

	Yes	No
25. Would you take drugs which may have strange or dangerous effects?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
26. Do you often feel 'fed-up'?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
27. Have you ever taken anything (even a pin or button) that belonged to someone else?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
28. Do you like going out a lot?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
29. Do you prefer to go your own way rather than act by the rules?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
30. Do you enjoy hurting people you love?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
31. Are you often troubled about feelings of guilt?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
32. Do you sometimes talk about things you know nothing about?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
33. Do you prefer reading to meeting people?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
34. Do you have enemies who want to harm you?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
35. Would you call yourself a nervous person?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
36. Do you have many friends?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
37. Do you enjoy practical jokes that can sometimes really hurt people?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
38. Are you a worrier?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
39. As a child did you do as you were told immediately and without grumbling?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
40. Would you call yourself happy-go-lucky?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
41. Do good manners and cleanliness matter much to you?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
42. Have you often gone against your parents' wishes?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
43. Do you worry about awful things that might happen?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
44. Have you ever broken or lost something belonging to someone else?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
45. Do you usually take the initiative in making new friends?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
46. Would you call yourself tense or 'highly-strung'?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
47. Are you mostly quiet when you are with other people?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
48. Do you think marriage is old-fashioned and should be done away with?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
49. Do you sometimes boast a little?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
50. Are you more easy-going about right and wrong than most people?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
51. Can you easily get some life into a rather dull party?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
52. Do you worry about your health?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂

	Yes	No
53. Have you ever said anything bad or nasty about anyone?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
54. Do you enjoy co-operating with others?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
55. Do you like telling jokes and funny stories to your friends?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
56. Do most things taste the same to you?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
57. As a child were you ever cheeky to your parents?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
58. Do you like mixing with people?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
59. Does it worry you if you know there are mistakes in your work?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
60. Do you suffer from sleeplessness?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
61. Have people said that you sometimes act too rashly?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
62. Do you always wash before a meal?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
63. Do you nearly always have a 'ready answer' when people talk to you?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
64. Do you like to arrive at appointments in plenty of time?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
65. Have you often felt listless and tired for no reason?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
66. Have you ever cheated at a game?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
67. Do you like doing things in which you have to act quickly?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
68. Is (or was) your mother a good woman?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
69. Do you often make decisions on the spur of the moment?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
70. Do you often feel life is very dull?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
71. Have you ever taken advantage of someone?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
72. Do you often take on more activities than you have time for?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
73. Are there several people who keep trying to avoid you?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
74. Do you worry a lot about your looks?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
75. Do you think people spend too much time safeguarding their future with savings and insurance?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
76. Have you ever wished that you were dead?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
77. Would you dodge paying taxes if you were sure you could never be found out? ...	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
78. Can you get a party going?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
79. Do you try not to be rude to people?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
80. Do you worry too long after an embarrassing experience?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂

	Yes	No
81. Do you generally 'look before you leap'?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
82. Have you ever insisted on having your own way?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
83. Do you suffer from 'nerves'?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
84. Do you often feel lonely?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
85. Can you on the whole trust people to tell the truth?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
86. Do you always practice what you preach?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
87. Are you easily hurt when people find fault with you or the work you do?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
88. Is it better to follow society's rules than go your own way?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
89. Have you ever been late for an appointment or work?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
90. Do you like plenty of bustle and excitement around you?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
91. Would you like other people to be afraid of you?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
92. Are you sometimes bubbling over with energy and sometimes very sluggish?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
93. Do you sometimes put off until tomorrow what you ought to do today?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
94. Do other people think of you as being very lively?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
95. Do people tell you a lot of lies?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
96. Do you believe one has special duties to one's family?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
97. Are you touchy about some things?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
98. Are you always willing to admit it when you have made a mistake?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
99. Would you feel very sorry for an animal caught in a trap?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
100. When your temper rises, do you find it difficult to control?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂