2007

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Recommended Citation

Haber, Randy, "Generalizability of religious affiliation effects on alcohol outcomes" (2007). *Posters*. Paper 6 Samuel B. Guze Symposium on Alcoholism.
http://digitalcommons.wustl.edu/guzeposter2007/6

Generalizability of Religious Affiliation Effects on Alcohol Outcomes

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The Guze Symposium
Washington University School of Medicine
February 15, 2007

Background

- **Most dimensions of religion, however measured, influence alcoholism risk including risk transmitted from parents to children (Gorsuch, et al, 1976).**

- **A number of studies indicate a specific negative (protective) association between certain affiliation types and alcohol use:**

  - **e.g. National Comorbidity Study indicated that those in 'fundamentalist religious denominations' exhibited lower alcohol abuse (AA) and alcohol dependence (AD) (Miller, 2000).**

- **Specific affiliation effects are also evident in MARC data sets:**

  - **In the MARC Australian data, "Other Protestant" religious affiliation emerged as one of six key predictors of alcohol dependence (AD) including conduct disorder, depression, smoking, high alcohol sensitivity, and having the ADH2*2 allele (Heath et al, 2003).**

  - **In MOAFTS female adolescent twin data, religious affiliation accounted for later onset of alcohol use by African American adolescents (Heath et al, 1999).**

Recent clarification

- **Using MOAFTS female adolescent data, Haber (submitted) demonstrated that:**

  - **Parental history of AD robustly predicts offspring AD symptoms in COAs.**

  - **Religious affiliation moderates offspring AD symptoms in COAs.**

  - **Religious differentiation accounts for most of the protective effect from religious affiliation.**

  - **Other religious variables didn't account for the differentiation effect.**

- **Limitations: MOAFTS is a 'Missouri-only' and 'female-only' sample.**

- **To test the generalizability of the differentiation effect, the above findings were replicated using a national sample including both genders.**

- **The replication study utilized offspring of Vietnam Era Twins data.**

Religious Differentiation

- **In Haber (submitted), Religious Differentiation accounted for most of the protective effect of religious affiliation.**

- **What is Religious Differentiation ?**

  – **Similar to individual differentiation, Religious Differentiation occurs at a social-religious level. Specifically, some churches hold beliefs and values different from their cultural setting whereas other churches accommodate or advance the cultural values of the larger setting.**

  – **'Type D' identifies those religious affiliations that <u>differentiate</u> themselves from their culture through beliefs and values that are different from their culture (e.g. values of 'religious purity', living 'godly').**

  – **'Type A' identifies those religious affiliations that <u>accommodate</u> to their culture through normative or progressive values, ideas and social concerns.**

- **Differentiating content: attitudes toward gambling, dancing, censorship, evolution, healing through prayer, return of Jesus Christ, school prayer, etc.**

Hypotheses

In this national sample of male and female adolescent/young adult offspring:

- **Hypothesis 1:** The elevated "risk" associated with parental alcoholism (that is, cross-generational transmission of alcohol risk) will be evidenced by increased offspring alcohol dependence symptoms in this sample.

- **Hypothesis 2:** The impact of parental history of alcoholism on offspring alcohol dependence symptoms (Chassin et al., 2004) will be conditioned upon the specific religious affiliation in which a child was raised (age 6-13).

- **Hypothesis 3:** This effect will be observed most robustly for Type D (differentiating) churches, and will not be evident for Type A (accommodating) churches and for those raised without a religious affiliation.

Supportive findings will support the conclusion that the observed effect of "religious differentiation" is generalizable to the adolescent US population.

Method: Offspring of Veterans

- **The current sample was drawn from the Vietnam Era Twin Registry, a sample of twin fathers born between 1939 and 1957 who were both active in the military service during the Vietnam Era (1965-1975).**

- **Father, up to 3 offspring, and the mothers of those offspring were interviewed.**

    - **Veteran fathers interviewed: 1295**

    - **Mothers of offspring interviewed: 904**

    - **Offspring Interviewed: 1329**

- **Family member interviews extensively characterized alcohol use, other psychiatric disorders, psychosocial concomitants, and religion.**

- **Variables utilized here were: Father and Mother's self-reported AD, Mother's report of parental education, family income, and childrearing history (including religious rearing), and Offspring self-reported AD symptoms.**

Sample Contrasts

Key sample similarities and contrasts are critical to establishing the generalizability of the observed effects.

Earlier MOAFTS Adolescents　　　　**Offspring of Veterans**

Similarities

Both were large community samples (non-treatment seeking)

Primarily an adolescent sample
Aged 13-19 (Mean 15.4 years)　　　**Aged 13-26 (Mean 19.2 years)**

Contrasts

Missouri-only sample　　**vs.**　　**Nation-wide sample**

Female-only sample　　**vs.**　　**Male and Female adolescents**

Measurement of Differentiation

- Following previous research (e.g. Bainbridge & Stark, 1985), a categorical variable was constructed that distinguished religious groups high and low on the differentiation-accommodation continuum.

- This construct was first articulated by Max Weber (1922), was revised by Reinhold Niebuhr (1929), was operationalized by Johnson (1963) and Stark (1985), and was recently applied to alcoholism research (Haber, submitted).

- This report follows the categorization model proposed by Stark to create a binary categorical variable (Type D - Type A). In addition, this study also included a Catholic category (Type C since the large group 'n' could bias results) and a non-religious reference group (Type N).

- In this replication, more affiliation groups met inclusion criteria (n=25 endorsements) for Type D and Type A categories. Analyses were conducted using both the original (Missouri) and the revised (National) categorization structure. Both categorizations produced identical results.

Groups: Type A (n=351): Luthern (n=148), Methodist (n=103), Presbyterian (n=41), United Church of Christ (n=33), Episcopalean (n=26). Type C (n=373): Catholic (n=373). Type D (n=378): : Baptist (n=242), Other Protestant (n=95), Mormon (n=41). Type N: Non-religious group (n=113)

Analytic Approach

- **Linear regression** analyses examined adolescent AD symptom counts, a quasi-continuous dependent variable as the criterion of interest.

- All analyses included adolescent offspring age, family income, and both father's and mother's educational level as covariates to control for SES variability as a possible confounding influence.

- **Model 1** examined Paternal alcoholism as a predictor of offspring AD symptoms.

- **Model 2, 3 and 4** examined Paternal alcohol and one affiliation type and their interaction as predictors of offspring AD symptoms.

- **Model 5** simultaneously examined all three affiliation types and associated interaction terms as predictors of offspring AD symptoms.

Significant Type D affiliation main and/or interaction effects would support the Religion Differentiation hypothesis.

Results: Table 1

Demographics: Mean (std dev) and/or Percent

Father's age: 50.7 (2.7) years; Mother's age: 48.1 (5.0) years

Father's education: 13.7 (1.9) years
[92.6% had 12+ years, 35.6% only 12 years, 32.8% reached 16+ years]

Father'e employment: 92.8%

Household Income: $62,255 ($22,043)

Offspring age: 19.6 (4.1) years [Range: 12-26 years of age]

Offspring AD symptoms: 1.20 (1.62)
[49% had 0 sx; 33% had 1 or 2 sx; 18% had 3+ sx]

Results

Table 2: Paternal Alcoholism Effect

Effect	t=	df	p
Paternal AD	**3.45**	**1**	**.001**

Table 3: Paternal Alcoholism and Religious Affiliation Effects
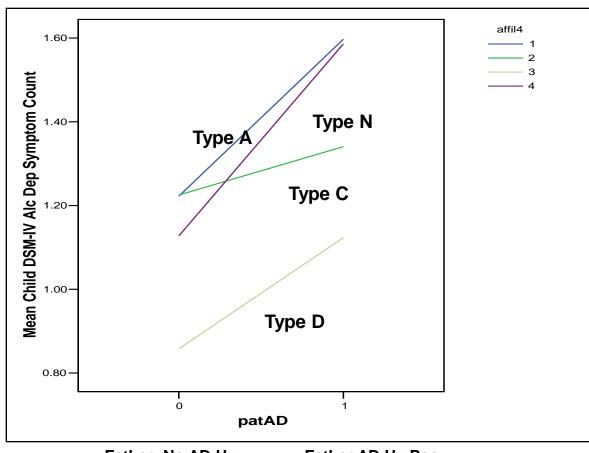
	Type A			Type C			Type D		
Effect	t=	df	p	t=	df	p	t=	df	p
Pat AD	**2.65**	**1**	**.008**	**3.53**	**1**	**.000**	**2.54**	**1**	**.01**
Type	1.35	1	.18	.67	1	.50	**-2.69**	**1**	**.007**
Pat AD X Type	.66	1	.51	-1.13	1	.26	.41	1	.68

Covariates: paternal and maternal education, family income, offspring age.

Four Affiliation Types by Paternal Alcoholism History

Findings

- **Model 1**: After accounting for covariates, paternal alcoholism was robustly associated with offspring alcohol dependence symptoms (t=3.45, df=1, p=.001).

- **Models 2, 3, 4:** Two factor models affirmed:

  - **the significant effect of paternal alcoholism.**

  - **a significant main effect for Type D affiliations in predicting offspring alcohol dependence symptoms (t= -2.69, df=1, p= .007); note that the interaction effect was not significant.**

  - **non-significant main and interaction effects for Type A.**

  - **In contrast to the MOAFTS data, Type C offspring in the current sample did not display any differentiating protective effect.**

- **Model 5:** Simultaneous analyses provided identical results.

Discussion

- This effort confirmed that a "religious differentiation" effect, first identified in the MOAFTS female adolescent sample for Type D affiliations, **was generalizable** and was affirmed in this national sample of male and female offspring.

- Differences in the nature of this significant effect may have strengthened the finding. The former study (MOAFTS) only found an interaction effect indicating influence on high-risk offspring but not low risk offspring. In the current study, **a main effect indicated a protective influence on both low risk and high risk offspring in Type D affiliations** who both exhibited lower rates of AD symptoms compared to others (see Type D in Figure 1).

- **Conclusion:** Evidence suggests that children raised with a differentiating type of religious affiliation is, to an important degree, protected from culturally normative alcohol use influences, and this effect appears to be most reliable for high risk offspring.

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An Interpretation

- Perhaps the most parsimonious interpretation of these findings focuses on the psychological impact of membership in a religious group that differentiates itself from cultural values when those cultural values include alcohol use behavior as normative.

- In the US, cultural standards are generally accepting of legal sales of alcohol, media advertising involving alcohol use, promotion of positive alcohol images by the sports and entertainment industries, and broad acceptance of alcohol use by the general public in spite of known risks, problems, and consequences.

- It seems clear that those churches that promote 'higher' standards such as 'religious purity', living 'godly', and that include abstinence from alcohol use as part of a larger religious value system are, in effect, promoting differentiation from accepted cultural standards and from alcohol use. Following this same logic, churches that tend toward accommodation to and perhaps progressive participation in the larger culture may not 'differentiate' themselves from the culture's alcohol norms to the same degree that differentiating churches do.

- If this is true, this would then explain the similarity between those raised in accommodating affiliations and those raised without a religious affiliation according to mainstream cultural values.

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Limitations

- **This study is limited and requires further study of the following areas:**

    - **Clarification of when low-risk offspring exhibit a protective influence; could this be an age effect more evident in older offspring?**

    - **Validation of the affiliation categorization scheme borrowed from Bainbridge and Stark (1985) and their predecessors.**

    - **Examination of how the differentiation effect varies by age, gender, ethnicity, and paternal, maternal, and subtype of parental alcoholism.**

    - **Identification of the unique influence of this differentiation construct compared to other religious variables.**

    - **Evaluation of the range of this "differentiating" effect beyond alcoholism, that is, to some or all types of drug abuse or with concomitant disorders such as conduct disorder and depression.**

    - **Examination of the level of genetic influence on this variable and the potential that gene-environment correlation is occurring with respect to family religious affiliation selection.**