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Reassessing the Link between Country Music and Suicide*

EDWARD R. MAGUIRE, *The University at Albany*
JEFFREY B. SNIPES, *The University at Albany*

Abstract

In their article assessing the link between country music airtime and metropolitan suicide rates, Stack and Gundlach (1992) found that the greater the airtime devoted to country music, the greater the white suicide rate. Employing ordinary least squares regression, they controlled for the effects of divorce, southernness, poverty, and gun availability. Their model accounts for 51% of the variance in urban white suicide rates. The authors interpret their findings as evidence that country music may "nurture a suicidal mood" (215), though they acknowledge that their model does not explain black suicide rates. In an attempt to replicate their suicide model for whites, we used the same data and methods. Our results indicate that country music — both bivariately and multivariately — has a negative, though insignificant effect on white urban suicide rates.

In their article entitled "The Effect of Country Music on Suicide," Stack and Gundlach (1992) observe a significant, positive relationship between percentage of radio airtime devoted to country music and white urban suicide rates. The authors posit that a country music subculture may "reinforce the link between country music and suicide" (211), though they acknowledge that their model does not explain suicide rates for blacks. In the present article we report the details of our inability to replicate Stack and Gundlach's suicide model for whites. Our replication efforts — using the same country music data, control variables, and statistical methodology — show that country music is not significantly related to white urban suicide.

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Methodology

Our sample is comprised of 50 metropolitan areas for which country music data is available. The airtime figures, like those used by Stack and Gundlach, are collected from the *Radio and Records Rating Report and Directory, Spring 1985* (98-158). Stack and Gundlach included only 49 of the 50 available areas in their analysis. Because they failed to identify the missing region, however, we were forced to include all 50 areas. As we mention below, this does not make a difference.

As in the Stack and Gundlach study, suicide data are taken from the annual Mortality Detail Files (National Center for Health Statistics 1984-85), as provided by the Inter-University Consortium for Political and Social Research (ICPSR) at the University of Michigan. Because the data are reported as individual suicides, we aggregated from the individual level to the metropolitan area. The endogenous variable is the number of white suicides per 100,000 whites in the population. Like Stack and Gundlach, we used the mean of the 1984 and 1985 rates to reduce measurement error. White population is calculated by multiplying the census population by the percentage of whites in each area (U.S. Bureau of the Census 1986).

To test for possible sources of spuriousness, Stack and Gundlach introduced four control variables, including divorce, poverty, southernness, and gun availability. To control for marital instability, Stack and Gundlach extracted crude divorce rates from CO-STAT 3 (U.S. Department of Commerce 1988). We did the same. Divorce rates were calculated by summing the populations for which divorces were calculated (VST63080 in CO-STAT 3) across counties in each metropolitan area (New York, e.g., includes Kings, Queens, Bronx, and other counties), as well as taking the sum of the number of divorces in each area (VST61080) and dividing the latter figure by the former. Though different years were available for divorce rates, we used the 1980 census. We also ran the model with 1984 rates, but this did not make a difference.

To measure poverty they developed an index of structural poverty using county level data. However, they note that "an analysis using the percentage of individuals below the poverty level as an index of poverty yielded the same results as those using the structural poverty index" (1992:217). Thus, to control for poverty, we used this percentage, obtained from CO-STAT 3. This involved summing the number of persons below the poverty line for each area (POV21079) and dividing by the total number of persons for whom poverty status was determined (POV20079).

Stack and Gundlach use a dummy variable to control for southern region, as categorized by the U.S. Bureau of the Census (1991). We controlled for southernness in the same fashion. They measured gun availability using "the number of retail outlets (per 100,000 population) listed under 'guns' or 'firearms' in the . . . yellow pages." Although this is a poor measure of gun availability, to remain consistent, we too incorporated this measure.

TABLE 1: Raw Data for Country Music and White Suicide Rates

City	Country Music Percent Airtime	Suicide Rate
New York	3.1	6.49
Los Angeles	3.6	17.05
Chicago	5.8	11.66
San Francisco	6.0	41.83
Philadelphia	3.3	7.90
Detroit	3.6	12.84
Boston	2.4	11.34
Houston	12.8	17.33
Washington D.C.	7.7	11.29
Dallas	17.4	17.75
Miami	3.1	12.71
Nassau/Suffolk	2.9	8.73
Pittsburgh	4.6	11.48
St. Louis	11.3	9.90
Atlanta	13.9	14.65
Baltimore	8.5	7.56
Seattle	10.5	10.84
Minneapolis/St. Paul	8.5	11.84
Anaheim	5.8	15.06
San Diego	5.9	17.86
Tampa	12.3	17.46
Cleveland	5.3	9.33
Denver	8.0	20.47
Phoenix	14.0	19.20
Milwaukee	7.3	12.14
Providence	1.6	10.46
Kansas City	19.9	9.70
San Jose	5.6	14.22
Cincinnati	8.6	8.83
Portland	8.3	12.03
New Orleans	7.4	18.91
Columbus	11.1	9.02
Sacramento	12.9	16.21
Buffalo	5.6	9.67
Norfolk	10.0	10.40
Indianapolis	13.3	14.26
San Antonio	15.8	15.89
Hartford	0.0	8.98
Riverside	5.0	18.55
Charlotte	22.1	8.65
Rochester	7.1	10.62
Oklahoma City	22.6	17.69
Louisville	17.7	11.28
Salt Lake City	10.9	14.94
Dayton	11.1	8.56
Birmingham	26.8	14.82
Nashville	27.4	13.53
Memphis	16.8	18.49
Winston-Salem	19.2	13.05
Albany	8.3	9.06

TABLE 2: Bivariate Correlation Matrix

	Divorce	Poverty	Southern	Gunrate	Country	Suicide
Divorce		.054	.380	.616	.604	.359
Poverty			.518	.103	.219	.092
Southern				.340	.595	.100
Gun rate					.535	.262
Country						.103

Results

Stack and Gundlach report a zero-order correlation between country music and white suicide rates of .54 ($p < .05$). We find this correlation to be .103 ($p > .05$). Because of the sheer controversy of this result in itself, we include the data for these variables in Table 1. The problem most likely lies within the country music data. Stack and Gundlach report a zero-order correlation between country music and southern region of .26, whereas we find this correlation to be .595. Given that we used the same source as Stack and Gundlach to determine southern region and given that the coding of this variable should be straightforward, it is doubtful that our results can be attributed to the southern variable. More likely, *even though we also used the same source for country music airtime*, the error pertains to how this measure is recorded. We checked several times to ensure that we entered the country music variable correctly from the source.

To test for the effect of country music on suicide, we used ordinary least squares (OLS) regression, controlling for poverty, southernness, divorce, and gun availability. No heteroscedasticity was found, and the residuals are approximately normally distributed. Collinearity, while higher than that observed by Stack and Gundlach, is not problematic, as no variance inflation factor (VIF) is higher than 3. San Francisco appears to be the only significant outlier; its suicide rate is more than twice the second-highest rate. When San Francisco is excluded from the model, the overall results are different (higher R^2 and more significant effect of divorce), but the effect of country music on suicide rate does not vary. To ensure that Stack and Gundlach's results are not attributable to their having only 49 cases, we ran the model 50 times, deleting a different case each time. In only one case did the R^2 change more than 2% (San Francisco).

Table 2 provides a bivariate correlation matrix of the variables in this model. Divorce rate has the largest correlation with white suicide rate; high divorce rates are associated with high suicide rates ($r = .359$).

Table 3 replicates Stack and Gundlach's multivariate model, predicting white suicide rates with country music, poverty, southern region, divorce, and gun availability. The effect of country music is negative, and not statistically significant. The only significant predictor of white suicide rate is divorce rate ($\beta = .43$; $p = .03$). The overall model is not statistically significant ($F = 1.79$; $p = .13$).

TABLE 3: The Effect of Country Music, Poverty, Southern Region, Divorce, and Gun Availability on Metropolitan Suicide Rates

		Beta	b	t	p	VIF
Country music		-.23	-19.19	-1.11	.27	2.22
Poverty		.12	.23	.75	.46	1.41
Southern region		-.03	-.37	-.16	.87	2.08
Divorce		.43	1.51	2.22	.03	1.96
Gun availability		.12	.58	.65	.52	1.72
Intercept			3.19	.71	.48	
R^2		.17			.13	
Degrees of freedom	5,44					
F	1.79					
p	.134					

Conclusion

Due to the significance and implications of Stack and Gundlach's (1992) findings that country music affects suicide, we sought to replicate their study. Our most disturbing finding is that the bivariate correlation between country music and suicide rates — *using the same sources as Stack and Gundlach* — is .10, as compared to their observed correlation of .54. Controlling for the same variables as Stack and Gundlach, we still find no significant impact of country music on suicide. We suggest as one possible explanation that the discrepancy may be based on a misrecording of the country music data. Indeed, this would not be the first instance of coding errors in sociology (e.g., see Firebaugh 1980; Jackman 1980). While we have not disproved the claim that country music affects suicide, we have cast considerable doubt on the single study that does report such an effect.

References

Firebaugh, Glenn. 1980. "The Case of the Missing Values Card, and Other Mysteries: Another Look at the Effect of Government Spending on Income Inequality." *American Sociological Review* 45:137-46.

Jackman, Robert. 1980. "Keynesian Government Intervention and Income Inequality." *American Sociological Review* 45:131-37.

National Center for Health Statistics. 1984-85. *Mortality Detail Files.* Vol. 4, 5. ICPSR.

Radio and Records Rating Report and Directory, Spring 1985. Los Angeles: Radio and Records.

Stack, Steven, and Jim Gundlach. 1992. "The Effect of Country Music on Suicide." *Social Forces* 71:211-18.

U.S. Bureau of the Census. 1986. *State and Metropolitan Area Data Book, 1986.* Government Printing Office.

U.S. Department of Commerce. 1988. *County Statistics File 3* (CO-STAT 3), United States. Government Printing Office. (ICPSR Study 9168).