

EMS dispatcher and not the police communications officer. EMS has several options. If an ambulance is available and another is in reserve, EMS may prefer to go out to a road accident even if the probability of need seems small. The ambulance could proceed at normal speed, without the use of emergency sirens, and remain alert to a probable recall.

Some say that ambulances could be dispatched more often when injuries are uncertain. Such a policy would reduce the number of communication delays in life-threatening road accidents. But at what cost? Apparently there are differences in opinion on this matter.

Because conditions vary locally, no blanket policy recommendation may be possible. At present, communications of-

ficers have little feedback on the overall consequences of their decisions. However, it is possible to link police communication data with emergency medical data, which makes it possible to monitor the effects of any change in policy on outcome and cost.

No one knows for sure how many lives could be saved or recoveries eased by the faster arrival of an ambulance. But no one will argue against the need for a rapid EMS response when lives may be in danger. □

### Acknowledgments

This paper is based on a final report to the AAA Foundation for Traffic Safety in Washington, DC, which supported this research with a grant. Data were obtained with the cooperation of the Missouri State Highway Patrol and the Mis-

souri Department of Health. I would like to thank the Missouri chapter of the Associated Public-Safety Communications Officers, Inc., for an invitation to discuss communication problems at one of their meetings.

Any errors in this paper are my responsibility.

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## Race, Belief in Destiny, and Seat Belt Usage: A Pilot Study

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### Introduction

In the effort to increase seat belt usage, numerous strategies (legislation, educational campaigns, monetary incentives, etc.) have been employed with varying degrees of success. Of particular concern are racial and ethnic minority groups, who have lower rates of seat belt usage than Whites.<sup>1,2</sup> Additionally, Blacks have been found to be less responsive to efforts to increase use.<sup>2</sup>

Race per se (i.e., a physical attribute) certainly cannot explain differences in seat belt usage. One consideration that might be taken into account in targeting minority groups is differences in motivation. One possible difference in motivation is adherence to the concept of destiny. If one is strongly wed to the notion that the end of life is divinely decreed, efforts based on reason or logic will fall on deaf ears. Rotter<sup>3</sup> found that minority groups—Blacks and Puerto Ricans—were more fatalistic than Whites. In a study of seat belt use in families, Williams<sup>4</sup> found correlations between a measure of destiny and seat belt use by mothers and daughters. In another study, seat belt users identified themselves as fatalistic less often than nonusers.<sup>5</sup>

The purpose of this study is to assess the extent to which belief in destiny might explain lower seat belt usage among racial and ethnic minority groups.

### Method

The study was carried out during February and March of 1988 in the city of Harrisburg, Pennsylvania, and its suburbs.

In line with the aim of quickly surveying a large number of people who were not being paid to participate in the study, a data entry sheet was developed resembling a data file (i.e., variables were represented in the columns and cases in the rows). Responses were directly entered into these data sheets. Thus, an interview could be completed in a matter of minutes.

A combination availability and purposive sample design was used. The greater Harrisburg area contains only

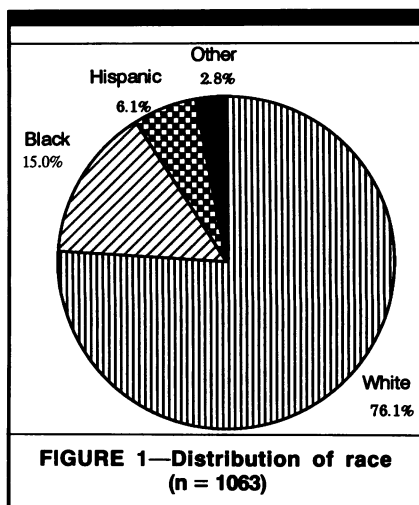
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This paper was submitted to the Journal July 22, 1991, and accepted with revisions November 12, 1991.

## ABSTRACT

A survey of 1063 individuals found that when belief in destiny was statistically controlled, differences in seat belt use by race disappeared. Thus, racial differences in seat belt use are statistically accounted for and might be explained by belief in destiny. Efforts to increase seat belt use should target minority groups rather than include them in broadbrush programs. Further, these efforts should take into account this important difference in motivation. (*Am J Public Health*. 1992;82:875-877)



7.3% Blacks and Hispanics, and the purpose of this study dictated that these people be overrepresented in relation to their relative size in the population.<sup>6</sup> A probability sampling technique, short of using an extremely large sample, would not produce a sufficient number of minority group members to facilitate analyses. Consequently, two criteria were used in selecting participants: (1) maximization of variation—i.e., subjects were sought in a wide array of settings (shopping malls, a motor vehicle bureau, public and private offices, etc.); and (2) overrepresentation of minority group members—i.e., minorities were visually sought out for inclusion and their communities were canvassed.

In addition to demographic information, participants were asked whether they owned an automobile with seat belts that automatically fastened. Anyone who answered yes to this question was precluded from the study. Seat belt usage was operationalized by asking people to approximate the percentage of the time they used seat belts. To measure destiny, the following statement was read to participants: "There is no point in using seat belts since you can't change your destiny." Participants were given a 5 × 8-in card with a seven-point Likert scale, which ranged from *strongly disagree* to *strongly agree*, and were then asked to report their level of agreement with the statement.

## Results

The sample was made up of 1063 participants: 690 females (64.9%) and 373 males (35.1%). The mean age of the sample was 38.3 years (SD = 17.1 years). The modal category for race was *White* (76.1%), with minority group members

TABLE 1—Summary of Two-Factor Analysis of Variance Predicting Seat Belt Use

Variable	df	Sum of Squares	Mean Square	F Ratio	P
Destiny	2	110133.29	55066.65	52.60	.0001
Race	1	1136.62	1136.62	1.09	.298
Destiny × race	2	3458.47	1729.24	1.65	.193
Error	1057	1107483.34	1047.76		

making up 23.9% of the sample (see Figure 1). The mean for seat belt usage ("what percent of the time do you use seat belts?") was 73.6% (SD = 34.2%), with a range running the full gamut (0% to 100%). In response to the statement, "There is no point in using seat belts since you can't change your destiny," the mean level of agreement was 2.2 (SD = 1.7), which corresponds to *disagree* on the seven-point Likert scale.

For purposes of data analysis, the variable for race was dichotomized into *White* and *non-White* categories. Non-Whites' level of agreement (mean = 2.46, SD = 1.9) was significantly greater than that of Whites (mean = 2.08, SD = 1.6) regarding the seat belt–destiny statement ( $t = 3.14$ ,  $df = 1061$ ,  $P = .0017$ ). Non-White seat belt usage (mean = 66.8%, SD = 35.2%) was significantly and substantially lower than that of Whites (mean = 75.4%, SD = 34.1%).

To examine the relationship between race and seat belt usage while statistically controlling for belief in destiny, a two-factor analysis of variance model was used. In this analysis, the seat belt–destiny variable was collapsed into three categories (*disagree*, *neutral*, and *agree*). A summary of this analysis reveals that there is no significant interactional effect and that the only significant predictor of seat belt use is the destiny variable (see Table 1). It is thus apparent that the original difference by race in seat belt usage could be an artifact that disappears once belief in destiny is statistically taken into account.

## Discussion

The purpose of this study was to examine the relationship between race and seat belt usage vis-à-vis the belief in destiny. A multivariate model was used to examine simultaneously the contributions of race and belief in destiny in explaining reported seat belt usage. Differences in usage by race were statistically accounted for by differences in the belief in destiny.

Two limitations of this study are rather apparent: a nonprobability sample was used and seat belt usage was based on self-report. It has been demonstrated that reported use of seat belts is greatly inflated in comparison with observed use.<sup>7,8</sup> Given the exploratory nature of this study, reported use should be taken as an index rather than an estimate of actual use. Because this study was not intended to get actual use estimates but to explore the hypothesis relating race, belief in destiny, and usage, the present findings are certainly provocative and warrant further and more careful study.

Although this study is only exploratory, its findings suggest two points with implications for social policy. First, broadbrush strategies that do not take into account racial differences in motivation to use seat belts can have only limited success. Second, interventions based on logic or rationality appear to be inappropriate strategies with Hispanics and Blacks. Instead, programs might be developed in conjunction with churches in Hispanic and Black communities, where the church has an important voice. Although some may view such an approach as alien to American tradition and values, public safety and welfare suggest pragmatism over idealism. □

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## Work-Site Nutrition Intervention and Employees' Dietary Habits: The Treatwell Program

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### Introduction

This paper presents the results of a randomized study testing the efficacy of Treatwell, a work-site nutrition intervention program designed to promote dietary changes associated with the reduction of cancer risk. This program focuses on two dietary goals of the National Cancer Institute: reducing consumption of fat to 30% of total calories and increasing consumption of dietary fiber to 20 to 30 g per day.<sup>1</sup> The study tested the hypotheses that there would be a significant decrease in calories from fat and increase in grams of fiber consumed by employees of the intervention work sites compared with employees of control work sites.

### Methods

Sixteen work sites from central Massachusetts and Rhode Island were recruited to participate in the study, described elsewhere.<sup>2</sup> Work sites ranged in size from 300 to 1400 employees, and each had a cafeteria with a kitchen. The work sites, stratified by size and distribution of employees by gender, were randomly assigned to an intervention or control condition. At intervention work sites, programs such as classes and food demonstrations were targeted to individuals, and cafeteria point-of-choice labeling programs provided environmental support. In addition, programs were tailored to each work site through an employee advisory board, and eating pattern guidelines provided consistent messages across intervention activities (Appendix 1). No intervention was provided at the control work sites.

A questionnaire was distributed prior to the intervention in summer 1988 (time

1) to 275 employees randomly selected from each work site. Respondents were surveyed a second time at the end of the intervention period (time 2). This survey included a 67-item semiquantitative food frequency questionnaire (FFQ) developed and validated by Willett and colleagues.<sup>3</sup> Employee characteristics, including sex, age, education, ethnicity, occupation, and body mass index (BMI), were also assessed.

One work site assigned to the intervention group elected not to participate in the intervention. Nevertheless, dietary changes of employees of all eight companies assigned to the intervention were compared with those of employees at the control sites. This approach permitted estimation of the overall effectiveness of this program in work sites that agreed to participate, regardless of their "compliance" with the program.

Analyses of the major outcomes were based on repeated measures analysis of variance using the SPSS-X software program.<sup>4</sup> In analyses, employee effects were

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This paper was submitted to the *Journal* February 20, 1991, and accepted with revisions August 22, 1991.

## ABSTRACT

In a randomized, controlled study of the Treatwell work-site nutrition intervention program, which focused on promoting eating patterns low in fat and high in fiber, 16 work sites from Massachusetts and Rhode Island were recruited to participate and randomly assigned to either an intervention or a control condition. The intervention included direct education and environmental programming tailored to each work site; control work sites received no intervention. A cohort of workers randomly sampled from each site was surveyed both prior to and following the intervention. Dietary patterns were assessed using a semiquantitative food frequency questionnaire. Adjusting for work site, the decrease in mean dietary fat intake was 1.1% of total calories more in intervention sites than in control sites ( $P < .005$ ). Mean changes in dietary fiber intake between intervention and control sites did not differ. This study provides evidence that a work-site nutrition intervention program can effectively influence the dietary habits of workers. (*Am J Public Health*. 1992;82:877-880)