

# Desire for Control and Gambling Behavior Among Problem Gamblers

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*The relationship between individual differences in the general desire to control events and gambling behavior was examined. Desire for control scores for members of a Gamblers Anonymous group were found to be significantly related to how frequently the gamblers had bet upon games and events containing a slight perception of controllability. Consistent with earlier research linking gambling behavior with the illusion of control phenomenon, no such relationship was found when using desire for control scores to predict how frequently the subjects had bet upon games without this hint of controllability. Desire for control scores also tended to be related to how much money the gamblers had lost during their worst year of gambling. However, contrary to prediction, the gamblers were found to have significantly lower desire for control scores on the average than a matched comparison group. It is suggested that individual differences in desire for control influence gambling behavior but are not a cause of problem gambling.*

Americans spend billions of dollars each year in various forms of legal and illegal gambling (Kallick-Kaufmann, 1979). Although the vast majority of people who engage in gambling do so only occasionally and within their financial limits, there may be millions of problem gamblers in this country for whom continued gambling often results in great distress for the individual and his or her family. One area of social-psychological research that may help to explain gambling behavior is that concerned with the concept of "illusion of control" (cf. Langer, 1975). It has been found in several investigations that certain cues suggesting an individual has some control over the outcome of a game will increase that person's perception that he or she will be able to control an otherwise obviously chance-determined outcome (Langer, 1975; Langer & Roth, 1975; Strickland, Lewicki, &

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Katz, 1966; Wortman, 1975). For example, subjects made larger bets when allowed to throw the dice after knowing what number they "were shooting for" (Strickland et al., 1966) and were more reluctant to trade lottery tickets when allowed to select their own number (Langer, 1975).

This phenomenon has some obvious implications for gambling behavior. Hints that a gambling situation might have an element of personal control (such as pulling a slot machine lever or being able to size up the horses for an upcoming race) might result in enough of an illusion of control to entice a few people to gamble who otherwise might not and to cause those who gamble to increase their bets. If this is the case, then it can be speculated that people who generally hold a high desire to control events might be more susceptible to the illusion of control than those who do not, and that these people might be more likely to gamble in these situations.

To test this hypothesis, Burger and Cooper (1979) divided college students into two groups based upon their scores on the Desirability of Control (DC) Scale. Half of the subjects in each group were placed in a gambling situation in which they were allowed to throw the dice after finding out what the winning number would be (i.e., high illusion of control situation). The other half placed their bets and tossed the dice (which remained covered) before they knew the winning number. The investigators found that the high-DC subjects demonstrated the illusion of control, betting more when the situation hinted at their control, but the low-DC subjects did not. In a follow-up investigation, Burger and Schnerring (1982) found that this illusion of control was found for high-DC subjects only when they played for extrinsic prizes. When these subjects played the gambling game for mere poker chips, no illusion of control was found.

These two experiments suggest, therefore, that people high in the desire for control are more susceptible to the illusion of control, and that this individual difference may therefore play a role in identifying people with gambling problems. This speculation is limited, however, by the subject population used in these investigations (college students) and the artificial nature of the experimental task. Therefore, the present research was an initial attempt to test the applicability of these findings to problem gambling behavior. Individual differences in desire for control were measured for members of a Gamblers

Anonymous group and a matched comparison group. In addition, information about the amount of money lost by the gamblers and the types of games they had bet upon was collected. It was predicted that the extent to which the gamblers had bet upon games with an element of potential control (high illusion of control situations) would be related to their DC score, but not the extent to which they had bet upon nonillusion of control games. It also was expected that the amount of money lost by the gamblers would be related to their DC score, with more money being bet (and eventually lost) by those with higher DC scores. Finally, it was predicted that the gamblers would have a higher average DC score than the matched nongamblers.

The decision to use members of Gamblers Anonymous as subjects instead of people who currently were engaged in heavy gambling was based upon several reasons. First, the subjects could be obtained in a more random fashion (i.e., all members of the group as compared with acquaintances of the researchers). Second, these people had identified themselves as having a gambling problem, something current gamblers might not be willing to do. Third, it was felt that the Gamblers Anonymous group would be more honest about reporting their gambling behavior, particularly their losses, than would current gamblers. The major disadvantage, of course, lies in the representativeness of this group for other problem gamblers and in any changes in DC levels that might have come about from their experiences in Gamblers Anonymous. As such, this research should be seen as but an initial effort to determine the relationship between DC levels and problem gambling behavior.

## METHOD

### Subjects

Thirty-six adults, ranging in age from 24 to 65, served as subjects. Eighteen subjects, 17 men and 1 woman, were members of a local chapter of Gamblers Anonymous. A comparison group of 17 men and 1 woman from various civic organizations and businesses in the same general geographic region also participated. All Gamblers Anonymous members contacted served in the experiment. Members of the comparison group were matched with the gamblers on the variables of age, sex, race, education level, and marital status. No one

in the comparison group reported that they gambled frequently. In addition, none of the comparison group subjects contacted refused to participate.

### **Procedure**

Members of the Gamblers Anonymous chapter were contacted at two separate meetings of the organization. Although some members were present at both meetings, they were allowed to participate only once. An experimenter first administered a short questionnaire. In addition to demographic information, the questionnaire asked subjects their approximate annual income when they were actively gambling, the largest amount of money they had lost in one year of gambling, and how often they gambled on certain types of events. Subjects were asked to indicate on 5-point scales how frequently they bet on poker and cards, horse racing, casino games (craps, roulette, slot machines), sports events, and lotteries. Subjects then completed the Desirability of Control (DC) Scale (Burger & Cooper, 1979). The DC Scale was designed to measure the extent to which people generally hold a desire to control the events in their lives. Subjects are asked to indicate on 7-point scales the extent to which each of 20 statements applies to them (e.g., "I prefer a job where I have a lot of control over what I do and when I do it"; "I enjoy making my own decisions"). The scale has been found to have reasonable psychometric properties and to be related to several control-relevant behaviors (e.g., Burger, 1984; Burger, *in press*; Burger & Arkin, 1980; Burger, Oakman, & Bullard, 1983). Members of the comparison group completed the demographic information part of the questionnaire and the DC Scale only.

## **RESULTS**

It was predicted that DC scores would be related to gambling behavior, but only for those games and events that held an element of illusion of control. To determine the extent to which the five games and events listed on the questionnaire could be perceived as having an element of control, 47 undergraduates were asked to indicate on 9-point scales (with 1 = "Completely Chance" and 9 = "Completely Skill") the extent to which they felt that a bettor could have an influence over whether he or she wins or loses at each of the five games and events. The results of these ratings are presented in Table

TABLE 1 Mean Ratings of Chance Versus Skill Influence on Gambling Games

|   | <i>Mean</i> | <i>Standard Deviation</i> |
|---|-------------|---------------------------|
| Poker and Card Games                          | 5.42        | 1.59                      |
| Horse Racing                                  | 4.83        | 1.87                      |
| Casino Games (Craps, Roulette, Slot Machines) | 2.11        | 1.32                      |
| Sports Events                                 | 5.98        | 1.67                      |
| Lotteries                                     | 1.62        | 1.26                      |

*Notes.* For all items, 1 = Completely Chance; 9 = Completely Skill. N = 47.

1. As seen in the table, and consistent with the experimenters' expectations, three of the games and events appear to hold a significant element of skill (poker and cards, horse racing, and sports events), whereas two are perceived as almost completely chance-determined (Casino games and lotteries).

Two gambling frequency scores were calculated for each Gamblers Anonymous member. First, the ratings of how often he or she had bet on the three illusion-of-control games and events were totaled. Next, the frequency ratings for the two remaining games were added together. Each of these scores then was correlated with the DC score. It was found, as predicted, that DC scores were significantly related to the extent to which the subject had gambled on illusion-of-control games and events ( $r = .46, p < .05$ ), but not on the remaining games ( $r = .04$ ).

It also was predicted that DC scores would be related to the amount of money the gamblers had lost during their worst year of gambling. There was a tendency for the two measures to correlate ( $r = .38, p < .11$ ), with higher DC scores related to greater losses. When the amount of annual income was calculated into this measure by employing the percentage of one's income lost in one year as the dependent variable, this relationship with the DC score increased only slightly,  $r = .40, p < .10$ .

Next, the average DC score from the gamblers' group was compared with the scores from the comparison group. It was predicted that the gamblers generally would hold a higher DC score. However, the opposite pattern was found. The comparison group

subjects had significantly higher DC scores ( $M = 107.22$ ) than did the gamblers ( $M = 97.11$ ), dependent  $t(17) = 3.50$ ,  $p < .01$ .

## DISCUSSION

The results present a somewhat paradoxical picture of the relationship between individual differences in the desire for control and gambling behavior. Consistent with expectations, the higher the gambling subjects were in a general desire to control events, the more likely they were to have bet upon events that are perceived by members of the general population as having some element of personal control. This is consistent with earlier research indicating that high-DC individuals are more likely than lows to be susceptible to the illusion of control. In addition, there was a tendency for these subjects' DC scores to predict how much money they had lost during the worst year of their gambling. Thus, as predicted, desire for control appears to be related to gambling behavior among problem gamblers.

However, when the DC scores of the gamblers were compared with a matched control group a different picture emerged. Contrary to prediction, the gamblers had a lower average DC score than did the nongamblers. At least three explanations can be proposed to account for this unexpected finding. First, although care was taken to match the subjects on several relevant dimensions, it is possible that the Gamblers Anonymous and comparison group members still differ on an unknown variable that is related to DC level and that causes the comparison group to have excessively high scores. However, arguing against this hypothesis is the fact that the comparison group does not score very differently from other groups to which the scale has been given (e.g., Burger & Cooper, 1979; Woodward, Wallston, & Wallston, 1983). Instead, it is the gamblers who appear to score notably lower than average.

A second possibility is that the gamblers have had a change in their DC level since coming to grips with their problem and joining Gamblers Anonymous. It may be that the experience of "hitting bottom" after years of gambling lowered their DC scores, which at one time were quite high. However, arguing against this interpretation is the finding that current DC scores were good predictors of

the gambling behavior engaged in before joining Gamblers Anonymous.

Finally, the most plausible account of these data appears to be that whereas DC level is related to gambling behavior, it is not a cause of problem gambling. A desire to control events is not what drives people to begin or maintain excessive levels of gambling. However, after they have begun this behavior the illusion of control may influence their gambling. People high in the desire for control, gamblers and nongamblers, appear to be more susceptible to this illusion than are low-DC people.

The question that remains, however, is why the gamblers scored lower on the DC Scale than did the nongamblers. Before engaging in excessive speculation on this point it should be kept in mind that the results of this investigation are limited by whatever differences may exist between Gamblers Anonymous members and other groups of gamblers. As such, although the relationship between DC level and gambling uncovered here is consistent with that found with college student populations (Burger & Cooper, 1979; Burger & Schnerring, 1982), it may not apply to all gambling behavior or all types of gamblers.

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### ERRATA

Please note the following corrections to the article by Joel W. Grube et al., which appeared in the June 1984 issue of *Personality and Social Psychology Bulletin*:

Page 310, the terminal values of the *ns* should be 123, 318, and 837 for the smoker, potential smoker, and nonsmoker groups, respectively. For the instrumental values, the *ns* should be 122, 318, and 834 for the three groups.