Effects of the rehabilitation program "LEER" on psychological variables

Jutta BÜTTNER, Jürgen HOYER
J.W. Goethe Universität, Institut für Psychologie, Georg-Voigt-Str. 8, D-60054 Frankfurt/Main

INTRODUCTION

The objective of rehabilitation programs for DWI offenders is, generally, to reduce the incidence of drinking and driving by influencing offenders' attitudes and, hence, behaviour. More specific aims of these courses are not only to educate offenders about alcohol, its physiological impact, and resulting driving impairment but also to achieve higher self-awareness and motivation to examine alcohol related behaviour.

Programs generally attempt to attain these goals through various psychological interventions such as group discussion, role-playing, self-observation, self-control measures information, behaviour modification techniques, and homework.

The effectiveness of such programs is usually measured by the reconviction rate in the target population. Most effectiveness studies have been based solely on this criterion (Müller, 1993).

The objective of this study is to determine whether dimensions other than reduced DWI are also affected by these relatively intense programs. For example, at present no data exist on the question of whether variables such as generalised self-efficacy, private and public self-consciousness, or well-being are also modified by program participation.

Increased knowledge regarding these psychological variables is seen as a prerequisite for further improvement of such rehabilitation programs as well as their effectiveness.

THEORY

Theoretically, the following variables can be seen as being especially relevant in measuring rehabilitation: self-efficacy, self-consciousness and well-being.

1 Many thanks Mr. Ziegler (TÜ Hessen GmbH, Frankfurt) for making it possible to collect data at this institute.
Self-efficacy:
Generalised self-efficacy (Bandura, 1977) is a stable personality characteristic that reflects an individual's belief that he/she can cope with difficult demands. Bandura proposed that the efficacy of psychological interventions depends on the extent to which self-efficacy is raised, i.e., the individual's expectation to be able to perform a behaviour is created and strengthened. Furthermore, self-efficacy determines whether the subject engages in actively coping with problems as well as the length of time the person continues this behaviour in face of obstacles. Self-efficacy therefore is an important prerequisite for behaviour change.

Thus, our first hypothesis is that the program "LEER" will result in a general increase in self-efficacy.

Self-consciousness:
Attention can either be directed towards the self or the environment (Duval & Wicklund, 1972). High self-consciousness means that for a relatively large portion of a given period of time a person focuses upon aspects of the self. Both the situation and personal disposition influence the focus of attention. The disposition component (self-consciousness) contains the two dimensions of private and public self-consciousness. Private self-consciousness refers to the tendency to take note of inner thoughts and feelings. In contrast, public self-consciousness is a measure of consciousness of the fact that one is a social object as observed by others.

Given the objectives of the German rehabilitation program "LEER" we expect both dimensions of dispositional self-consciousness to increase. Our second hypothesis, therefore, is that self-consciousness will increase after rehabilitation treatment.

Well-being:
Our third hypothesis is that rehabilitation programs, due to their goal of stabilising participants, will increase participants' well-being. This hypothesis is controversial because empirical findings show that generalised self-efficacy can be seen as a part of well-being (Becker, 1991), whereas, self-consciousness correlates negatively with well-being (Ingram, 1990). According to Hull (1981), avoiding self-consciousness and its negative effects on well-being has been shown to be a reason for alcohol consumption.

METHOD

Participants:
This study is comprised of a total of 56 subjects (average age =36), including completers of the DWI rehabilitation program "LEER" (n=39) and control-subjects (n=17). Subjects were matched for age, sex and education and all are defined as excessive drinkers.
Program "LEER":

The rehabilitation program "LEER" is conducted for drivers with several drinking convictions. A certificate testifying to successful completion of the program leads to the return of a revoked licence. In general, drivers are admitted to the program who, after two previous drunken driving convictions and expiration of the revocation period, can provide a medical and psychological report stating that his/her drinking and driving problem is expected able to be corrected in a specific driver improvement program. The program starts with a two week period of self-observation followed by four group sessions each two hours long one and a half years after program completion. The period of self-observation includes an alcohol-consumption diary. The group sessions include the following methods to modify drinking and driving behaviour: group discussions, analysis of drinking behaviour, information on drinking and road safety, and homework.

Procedure:

The subjects were tested in groups. We examined the DWI subjects at three points on time: 1) before they took part in the "LEER" program, 2) after filling in the alcohol-consumption diary, and 3) after taking part in the four group sessions. We examined the control-subjects at similarly matched intervals. The first examination was regarded as a baseline.

All subjects completed a questionnaire at each of the three data collection points including a generalised self-efficacy inventory (Schwarzer, 1994), an inventory for measuring subjective well-being (Dalbert, 1992), and a self-consciousness inventory (Filipp & Freudenberger, 1989). The latter instrument is based on the public and private self-consciousness scales developed by Fenigstein, Scheier & Buss (1975). According to Osberg (1985) these scales are sensitive to change over time.

The inventory for measuring subjective well-being (Dalbert, 1992) includes the dimensions mood level and satisfaction with one's life as well as a scale describing the current mood. For the present study only mood level is of interest.

Analysis:

The effects of treatment on the psychological variables were tested unsin two by three factorial analysis of variance with repeated measurements. Group (experimental group s. control group) was a between-subjects factor and time (base-line vs. after alcohol-consumption diary vs. after group sessions) a within-subjects factor.

According to our hypotheses, we expected scores of private and public self-consciousness, self-efficacy, and well-being to be higher after treatment. This should be indicated by significant interaction between time and group.
RESULTS

Time-factor:
The MANOVA revealed no main effect for time (F(8;44)=1.43; p=.21).

Group-factor: Unexpectedly, the MANOVA revealed a significant main effect for the group factor (F(5;47)=2.70; p=.04) due to higher private self-consciousness (F=7.46; p=.00) and public self-consciousness (F(1;51)=9.43; p=.00) in the experimental group.

Interaction: As expected, averaged MANOVA showed significant interaction between group and time (F(8;198)=2.70; p=.01). Univariate F-tests revealed that this is true for the variables self-efficacy (F(2;102)=4.59; p=.01) and public self-consciousness (F(2;102)=3.65; p=.03) but not for private self-consciousness (F(2;102)=.32; p=.73) or mood level (F(2;102)=1.69;p=.19).

Self-consciousness:
To explore the interaction effect found for public self-consciousness, we also studied the trends between the three points of measurement. Variation in the level of public self-consciousness in the experimental group is not significant with regard to time; in the control group it is significant between the second and third point of measurement (t=3.59; p=.00) (See Figure 1). Public self-consciousness decreased in the control group between the second and third measurement while in the experimental group it remained constant.

As seen through the MANOVA, the groups differed significantly regarding self-consciousness. Thus, we examined the time factor for each group individually. At baseline, the groups did not differ significantly in any component of self-consciousness. At the second point of measurement, both groups differed significantly in public self-consciousness (t=2.16; p=.03) but not in private self-consciousness (t=1.55; p=.13). Public self-awareness in the experimental group was higher than in the control completing of the alcohol consumption diary.

At the time of the third measurement, both groups differed significantly in both public self-consciousness (t=2.27; p=.03) and private self-consciousness (t=3.35; p=.00). Self-consciousness in the experimental group was significantly higher than in the control group after group sessions.
Figure 1: Public and Private self-consciousness over time in the experimental group and the control group.

Figure 2. Self-efficacy over time in the experimental group and the control group.
Self-efficacy:
To examine the interaction effect found for self-efficacy, we looked more closely at the trends between the three points of measurement. The overall trend for self-efficacy in the experimental group was significant (t = -2.37; p = .02). Variation in self-efficacy in the control group was significant between the second and third measurement (t = -3.90; p = .05). The self-efficacy trend increased in the experimental group during the study while in the control group it varied over time. (See Figure 2)

Figure 3: Mood level over time in the experimental group and the control group.

![Mood level graph](image)

Mood level:
There was no main effect or interaction between group and time with regard to mood level.

DISCUSSION

In the present investigation we tested the hypotheses that self-efficacy, self-consciousness and well-being increase after participation in the DWI rehabilitation program "LEER". Data of program participants were compared with those of untreated control subjects. The first hypothesis was confirmed. Generalised self-efficacy clearly only improved in the experimental group. This indicates that rehabilitation programs might also improve health and stress related parameters in addition to driving and drinking parameters. The second hypothesis, that self-consciousness increases in the experimental group, was not confirmed. Instead, a significant main effect for self-consciousness was found indicating that participants in the program generally show higher scores in both public and private self-consciousness.
Additionally, the expected interaction was found for public self-consciousness. This indicates public self-consciousness, though not higher over time, was higher in the experimental group than in the control group after treatment. With respect to the interaction effect, these data must be interpreted with caution. In the program selection procedure those subjects who show at least some insight in the personal causes of their driving and drinking problems are selected for participation. Under these conditions, people with relatively high self-consciousness are likely to be selected.

The interaction effect found here likely indicates that treatment, especially the group sessions, must have some effect on self-consciousness. Indeed, self-consciousness is not raised but is held stable at the relatively high pre-treatment level (first point of measurement), whereas, in the untreated controls there is lower self-consciousness over time. In the control-group there is a possible transient self-consciousness raising effect of the testing itself which decreases at the third measurement. Finally, the hypothesis that well-being, indicated by the mood level, would be increased in the experimental group was not confirmed. Given that generalised self-efficacy clearly improved, this finding is unexpected. It is possible that confrontation with personal problems during the group session which might result in a continuously heightened level of self-consciousness which serves to counteract the expected effect.

Although our hypotheses were only partially confirmed, the findings show that variables relevant to general psychological health might be affected by participation in rehabilitation programs.

REFERENCES


