Translating Alcohol Delinquency into Health Management

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Initial Situation

• A DUI offence is alcohol abuse (as defined in traffic medicine [7])

• The per-capita consumption rate of pure alcohol among DUI offenders is 26.9l in contrast to the 14.6l consumed by the normal population [2]

• The analysis of usual blood screening markers (GGT, CDT) revealed that over 40% of the DUI offenders belong to the group of hazardous drinkers [3]

• Mecklenburg-Western Pomerania has the highest rate of accidents with personal injury caused by alcohol in Germany [5]

• DUI offenders have the highest relapse risk compared to all other traffic offences [4]

=> A change in drinking behaviour is necessary to avoid alcohol-related disorders and reduce DUI-relapse

but

DUI offenders avoid participation in rehabilitation programs as long as possible. Attendance is mostly due to repressive conditions (= failing the Medical Psychological Assessment).

Incentives for early participation in special training courses are not communicated (e.g. the reduction of the retention period according to § 69a (7) StGB / German Criminal Law).

Thus the study aimed

• to increase participation rates in early intervention by communicating incentives and using teachable moments => proactive approach

• to ascertain cognitive, behavioural and situational factors of attendance and reduce barriers of non-attendance

• to build up a network between the police, the delinquents and the health system, e.g. providers of training programs or outreach clinics

Theoretical Background

✓ The Transtheoretical Model of Behaviour Change (TTM) [6] to assess the delinquents problem awareness

✓ The Theory of Planned Behaviour (TOPB) [1] to measure their attitudes towards rehabilitation programs and the intention to join them

✓ The Health Action Process Approach (HAPA) [8] to predict the attendance or rather identify the relevant factors for attendance

Methods

Subjects & Procedure

The sample consisted of N=3.439 drunk drivers who had had a blood alcohol test according to § 81 a StPO / German Code of Criminal Procedure during the period of January 2003 to February 2004. The group was split into a treatment group (region of Pomerania, n=1451) and a control group (region of Mecklenburg, n=1988). Subjects in the treatment group received a hand-out with the relevant information about rehabilitation programs and a free-of-charge counselling offer. This hand-out was sent by the police within three weeks after the offence. In addition the treatment group was randomly split into a group which was activated by a phone call or a personal invitation by a staff member and a second group which received no further activation. The subjects in the control group were given neither hand-out nor invitation.

Beyond this we contacted 2.390 of those DUI offenders and asked them to fill out different specially designed questionnaires:

Firstly a “check-up” to assess their problem awareness [5]

Secondly a questionnaire to obtain all of the relevant variables of the TOPB & HAPA [1, 8]

One year after the offence we contacted them again to measure the total participation rates.

Data Analysis

a) Frequency distribution to allot the delinquents to the different phases of change

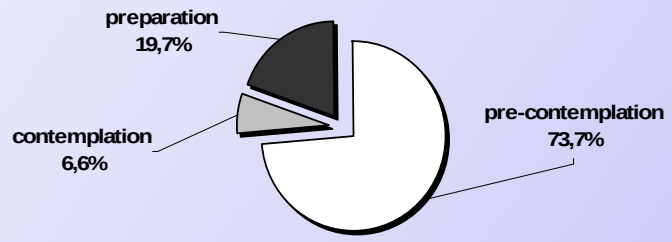
b) Linear regression analysis to verify the indicators of the intention to participate

c) χ2-test for frequency comparison in total participation rates (treatment group vs. controls, activated vs. non-activated)

d) Discriminant function analysis to examine the relevant factors to distinguish between participants and non-participants

Results

a) The Delinquents’ Problem Awareness

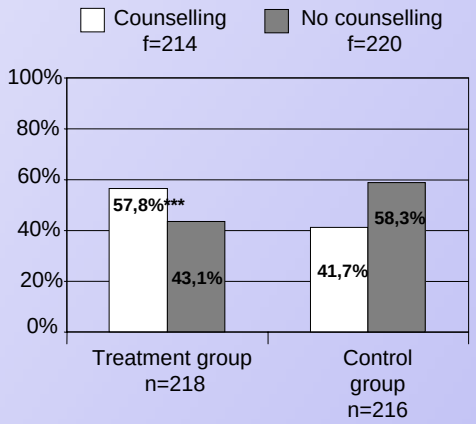


Classification of DUI offenders by check-up questionnaire into the different phases of change of the TTM soon after the offence (N=361)

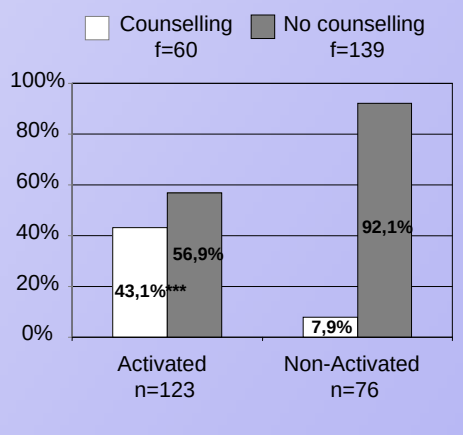
b) Attitude and Intention

Variables \ Group	Standardized beta-coefficients on the Intention to participate: Total N=361	Treatment group n=254	Control group n=107
Attitude towards the behaviour	.31***	.40***	.21*
Perceived ***behavioural control***	.18***	.24***	.14
Subjective norm	.29***	.11	.40***
Explained variance			
r^2	.42***.	.40***	.39***

c) Differences in Participation Rates



Effect of the treatment „hand-out“, treatment group vs. control group [χ^2(1, N=434) = 10,05; p=.001]



Effect of the treatment „invitation“ activated vs. non-activated group [χ^2 (1, N=199) = 27,42; p<.001]

d) Relevant Determinants to predict Participation

Variable \ r	Correlation with the Discriminant Function, n=177	
Situational barriers	.65***	*(p<.001)*
Action-planning	.65***	*(p<.001)*
Intention	.58**	*(p<.01)*
Perceived self-efficacy	.49**	*(p<.01)*
Situational ressources	.47*	*(p<.05)*
Situation-outcome expectancy	.43*	*(p<.05)*
Perceived severity of symtoms	.34	
Perceived vulnerability	.09	

The overall model had a canonical correlation equal to .39 and 82,1% of the group cases were correctly classified.

Conclusion

Most offenders show a loss of problem awareness and do not interpret their offence as a result of a misuse of alcohol. Increased problem awareness goes with an increased probability of counselling, but this problem awareness is not essential for participation. Early information and the communication of possible incentives for participation lead to a significant increase in participation rates as well. A change in strategic procedure and a pro-active approach could be starting points to optimize processes in health promotion of drunk drivers. The focus should be on: lowering the problems of communication between offenders and providers of information (e.g. counselling activities of the police and the courts), personalized and committing invitations for counselling (when-how-where-plan), lowering costs of rehabilitation programs, negotiating the obstacle “loss of mobility” through an area-wide supply.

References

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