

Effects of a community action programme on responsible beverage service (RBS)

Background

During the past decade the Swedish national alcohol policy has changed. Of the previous state-run alcohol monopolies for production, wholesale, and retail sales, only the retail monopoly remains intact. Furthermore, the number of licensed premises has increased markedly during the past 15 years.

Research based on Swedish data has shown a clear association between beer/liquor consumption at licensed premises and the assault rate (Norström 1998). Parallel to this we have also seen increased alcohol consumption in the Swedish population (Leifman 2002).

In 1996 the Stockholm County Council initiated a community alcohol prevention programme, entitled STAD, to prevent problems related to alcohol consumption at licensed premises. STAD is an abbreviation for Stockholm Prevents Alcohol and Drug Problems (Andréasson et al. 1999). The inner city of Stockholm was chosen as the intervention area. An action group was established consisting of representatives from the authorities and the hospitality industry. The main components in the community action programme have been community mobilization, a 2-day training course in responsible beverage service primarily for serv-

ers, and stricter enforcement of existing alcohol laws (Wallin et al. 2002a).

The objective of our presentation at the KBS-meeting at Vuoranta, Helsinki, in March 2002 was to present the effects of the community alcohol prevention programme on problems related to alcohol consumption at licensed premises.

Methods

Study design

The main outcome measures have been overserving alcohol service to under-age patrons, and violent crimes. We have used a quasi-experimental study design, with an intervention area and a control area for all studies. Both areas are situated in the centre of Stockholm, although not adjacent to each other.

Studies of overserving

Studies of overserving were conducted recurrently during the project period with a 1996 base-line, and a 1999 follow-up (Andréasson et al. 2000; Wallin et al. 2002a). Male actors portraying drunken behaviour visited licensed premises in

All studies of effects compiled in this brief case report have been presented and discussed in detail in the following articles: Andréasson et al. 2000; Wallin et al. 2002a; Wallin et al. 2002b; Wallin & Andréasson 2002.

pairs, and tried to order beer. Observers were present at all visits.

Studies of alcohol service to under-aged

Young people, who were 18 years of age (the legal drinking age for licensed premises in Sweden) but younger looking according to an expert panel, visited licensed premises trying to order beer. Measures have been conducted in 1996 (base-line), 1998 (follow-up I), and 2001 (follow-up II) (Wallin & Andréasson 2002).

Violent crimes

Police statistics on reported violent crimes for the period January 1994 to September 2000 were collected and analyzed using time-series analyses (ARIMA-models) (Box & Jenkins 1976). The following offences were included in our violence indicator: assaults, illegal threats and harassment, violence and threats targeted at officials (including policemen and doormen). The indicator covers all such reported violent crimes committed both indoors and outdoors between 10 pm and 6 am. Since the intervention began in January 1998, the pre-intervention period was 48 months, and the post-intervention period 33 months. The following double logarithmic model was used to estimate the intervention effect:

$$\ln E_t = a + b_1 \ln C_t + b_2 I_t + N_t$$

where E and C denote the violence indicator in the experimental and the control area, respectively. N is the noise (error term); this is allowed to have a temporal structure estimated in terms of autoregressive and/or moving average parameters. I is a dummy variable that represents the intervention (Wallin et al. 2002b).

Results

Overserving

At the baseline 92 licensed premises were visited. Only 5% of the licensed premises in both the project area and the control area denied alcohol service to the "intoxicated" patrons (Andréasson et al. 2000). The results from the follow-up study in

1999 showed a statistically significant improvement. About half, 47% of all licensed premises visited, in the project and control areas combined ($n=103$), refused alcohol service. Even though there were no statistically significant differences between licensed premises in the project area compared with the control area, the denial rate was the highest in RBS-trained licensed premises (55%) (Wallin et al. 2002a).

Alcohol service to under-age patrons

About half, 54% ($n = 600$) refused alcohol service to the under-age patrons at baseline in 1996. At the first follow-up the refusal rate was 58% ($n = 252$), and at the second follow-up in 2001 68% ($n = 238$) were denied alcohol service (Wallin & Andréasson 2002). The increased refusal rate of 14% in 2001 as compared to 1996 was statistically significant. There were no differences between the project area and the control area.

Violent crimes

The numbers of violent crimes in the intervention area and the control area are displayed in figure 1. Based on the premise of a gradual intervention effect beginning in January 1998 a model was estimated. In the model we controlled for a major annual event (the Stockholm Water Festival), in the month of August for the years 1994–1998 by including a dummy variable that was coded 1 for

Table 1. Estimated intervention effect on police-reported violence

	Parameter	SE
Intervention	-.344***	.046
Control	.313***	.054
Dummy August	-.166	.106
Noise		
AR(1)	.29**	.11
SAR(1)	.15	.10
SAR(2)	.39**	.11
Constant	4.14***	.23
Diagnostics		
Q*(12)	14.98, $p > .24$	
Q*(24)	24.69, $p > .42$	

*** $p < 0.001$ ** $p < 0.01$

*Test for autocorrelated residuals

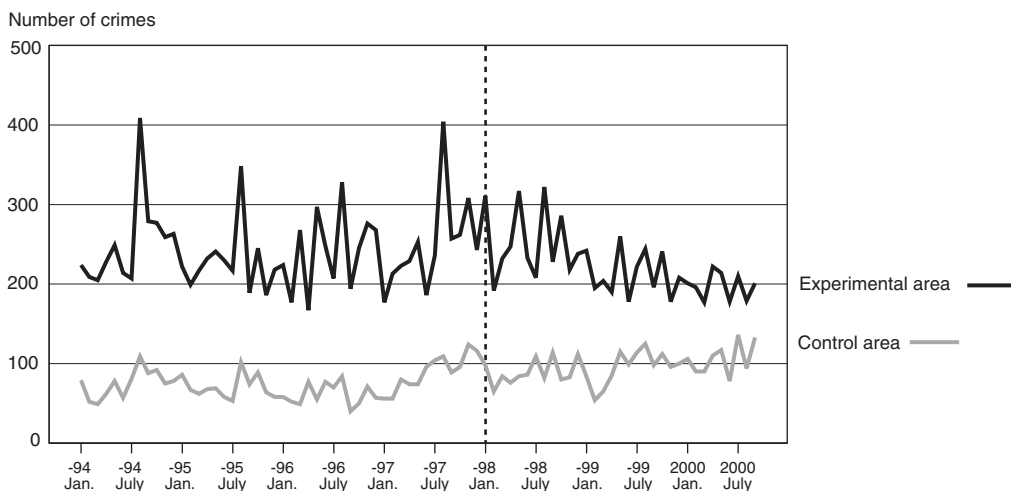


Figure 1. Police-reported violence in experimental area and in control area

August 1999 and August 2000, and 0 otherwise. No filtering was necessary to achieve stationarity as the crime indicator had no strong time-trends. Therefore the estimation was performed on the raw data.

The analyses showed a significant reduction in crimes in the project area when controlling for the development in the control area (see table 1). The change was estimated at -29% (Wallin et al. 2002b).

Discussion

The results from our studies indicate that it became harder for under-age and/or intoxicated patrons to be served alcohol at licensed premises in Stockholm during the project period. These changes occurred in both the project and control areas. There was also a statistically significant decrease in violent crimes of 29%, but only present in the project area.

Studies of policy development within the Stockholm Licensing Board show that they have changed their routines for monitoring alcohol service to minors or intoxicated patrons (Wallin et al. 2002a). A new routine of sending out notification letters to licensed premises, based on information, e.g from the police regarding identified problems at the premises was initiated in 1997. The majority of these letters has dealt with overserving, and the number of letters have increased during subsequent years. These letters have been dis-

patched on the same scale in both the project area and the control area, as the Licensing Board is responsible for both geographical areas. The Licensing Board has been very active in the action group, and stricter enforcement has been an important topic at several meetings. This development, along with other policy changes (such as police monitoring) might be one explanation for why there have been changes in alcohol service in both the project and the control area (i.e. spill-over effects).

The results from our time-series analyses of police reported violent crimes reported by the police showed a reduction of crime only in the project area (Wallin et al. 2002b). One explanation for this could be that there are more large nightclubs situated in the project area compared to the control area. If large establishments change their alcohol service practices, the impact on the frequency rate of violence may be greater than if smaller establishments change their drinking environment. The majority of the nightclubs in the project area have been active in the STAD-programme activities, for example by sending staff to RBS training or to join the membership of the action group. Another possible explanation might be synergy effects. Based on the research literature on aggression we know that a combination of several factors most probably contributes to violence (Graham et al. 2000). These are permissive environments, displaying the expectation and the acceptance of violence to be found in the existing drinking culture.

Overall it seems as if the multicomponent programme has contributed to a positive development

with a decrease in problems related to alcohol consumption at licensed premises in Stockholm. This adds to previous experience from other RBS-programmes indicating that a combination of several factors (RBS training and policy initiatives) probably have the strongest impact in terms of reducing harmful alcohol consumption and other related problems (Graham et al. 2000; Homel et al. 2001).

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