

Assessing success in a coalition-based environmental prevention programme targeting alcohol abuse and harms

Process measures from the Harvard School of Public Health “A Matter of Degree” programme evaluation

Introduction

Community-based prevention programmes that aim to reduce alcohol abuse and harms can experience tensions among participants, including external or expert agents working to catalyze change, local or grassroots change agents, and others. Tensions may be particularly acute in environmental efforts where altering aspects of the community are the focus and where there is a variety of agendas and voices. Because tensions can impede even well conceptualized efforts, it may be important to consider whether being community-based, with its attendant complexities, is a necessary criterion for a project's success, and if so, how to measure it. Meaningful measures may contribute to diagnosing and resolving tensions if they effectively pinpoint differences in opinion, strategy, priority and power.

In this paper we argue for including several measures of community-based and environmental

programme development within a comprehensive assessment of programme success. Measures reflect methods used in the ‘A Matter of Degree’ (AMOD) programme evaluation. AMOD is a ten-site demonstration testing the efficacy of an environmental approach to reducing binge drinking and related harms among college students in the United States.

Background

Within the 18 to 24 years old cohort, the age group at highest risk for alcohol abuse in the United States (Grant 1997), college students are at higher risk of problem drinking than their peers (Johnston et al. 1998; O'Malley & Johnston 2002). Approximately 44 percent of college students (half of all students who drink) report that they engage in heavy episodic or ‘binge’ drinking (Wechsler et al. 1994; 1998; 2000a; 2002a), a

For their assistance in reviewing the research methods and measures in the earliest stage of the evaluation's development we thank Alex Wagenaar and Shoshana Sofaer. We thank Kathleen Corrothers and the site evaluators for their help with the process evaluation and Lisa Travis for assistance with the development of the manuscript.

The Matter of Degree evaluation is supported by grants from the Robert Wood Johnson Foundation. We thank Marjorie Gutman, Seth Emont, Mary Ann Scheirer and the staff of the Foundation for their support.

standard measure of risky alcohol use defined for men/women as consumption of at least five/four alcoholic drinks per drinking occasion in the previous two weeks (Wechsler & Austin 1998; Wechsler et al. 1997; Nelson & Wechsler 2001; Wechsler et al. 1994). At this consumption level, significantly greater numbers of drinking-related harms are observed such as physical injury, drinking and driving, unprotected sex, illicit drug use, and disruptions in academic and social life (Wechsler et al. 1995). In the college setting, non-binge drinkers also report harms from binge drinking, termed secondary or secondhand effects. Secondhand effects are prevalent, increase with the overall level of binge drinking on a campus and range from incivilities to sexual assault (Wechsler et al. 1995).

Campus-based prevention of alcohol abuse typically has involved the use of educational and counseling programs targeting the drinker (Wechsler & Weitzman 1996; Wechsler et al. 2000b). While widespread, few of these efforts have been evaluated rigorously (Aguirre-Molina & Gorman 1996; Moskowitz 1989). Use of a broader range of prevention strategies reflects a shift in perspective towards one that considers population distributions of risky behavior and harms and environmental influences on those distributions rather than an individual-focused, high-risk group approach (Koopman & Lynch 1999; Rose 1992). New programmes bring individual and environmental strategies together (Giesbrecht et al. 1993; Wallack & Corbett 1987) and reflect research findings that alcohol abuse by young people is multi-determined with contributing factors located at multiple levels of the social continuum: individual, family, peer, school, community and culture (Bahr et al. 1995; Hawkins et al. 1992; Newcomb 1992, 255-297; Wagenaar & Perry 1994).

Specific environmental influences hypothesized to operate in the case of binge drinking in college include alcohol-related policies, alcohol availability, marketing practices, advertising, as well as non-alcohol issues such as university expectations of academic practice and rigour, and the range of recreational and social activities available to students. These elements are reflected in findings about: the elasticity of demand for alcohol among young adults (Chaloupka & Wechsler 1996); the positive association between bar density, location and binge drinking (Holder 1993; Watts & Rabow 1983; Wechsler et al. 1995; Weitzman et al., in

press a); the protective effects of policy (Holder et al. 1997; Wolfson et al. 1996) and social capital on alcohol abuse (Weitzman & Kawachi 2000); and, the influence of alcohol policies on high-risk drinking as well as the conditions in which prevention programmes operate (Greenfield 1994; Sosale et al. 1999; Wechsler et al. 2002b).

The AMOD programme

The AMOD programme is a prevention demonstration the goal of which is to reduce binge drinking and related harms among college students by changing social and structural determinants. AMOD is operating at ten sites throughout the US. The initiative provides grants to universities which have high levels of problem drinking as measured by data from the Harvard School of Public Health (HSPH) and the College Alcohol Study (CAS) (Wechsler et al. 1994; 1998; 2000a; 2002a), and have a commitment to environmental change. Grants support the development and five to eight year operation of a coalition of university and community representatives who plan and implement changes. The coalition model used in AMOD reflects a community organization approach to public health practice (Casswell & Gilmore 1989; Minkler & Wallerstein 1997; Thompson & Pertschuk 1992, 493-515). Coalitions are an increasingly popular strategy for dealing with complex health problems such as alcohol abuse (Wandersman et al. 1997), and are thought to facilitate locally acceptable solutions to problems where change is controversial and requires normative shifts (Kegler et al. 1998).

Use of a coalition model to change factors related to high-risk drinking among college youth may be particularly appropriate for several reasons. First, alcohol abuse among college students is an enduring problem and larger social factors on campus and in the community appear to be at work in its production (Wechsler et al. 2002a; Weitzman & Wechsler 2000; Weitzman et al. in press a; Weitzman et al. in press b). Second, it appears that no single solution is adequate for resolving the problem. Third, there does not appear to be a single 'owner' of the problem. Rather, reducing high risk drinking and harms appears to fall within the purview of several institutional sectors (i.e., health care, education, police and corrections) all of which have an investment in defining

the problem and finding solutions. Fifth, placing controls on the consumption and supply of a popular licit substance is difficult and may be accomplished best through community discourse. This requires the elaboration of community values and activism.

While designed to promote locally relevant changes, the overall AMOD programme stipulates that intervention programming should include efforts to alter alcohol-related: access/availability, price, promotions, and advertising. Work in these areas is expected to produce changes in alcohol-related policies and practices (Outcomes 1), alcohol availability and norms (Outcomes 2), and levels of high-risk drinking and related harms (Outcomes 3)

AMOD evaluation overview

The AMOD national evaluation is a prospective evaluation including process and impact studies. Evaluation goals include generating feedback for participant sites, ascertaining program efficacy, and identifying model programmes. The present paper draws on data from a stakeholder survey and a process monitoring system of interventions to describe indicators of community-involvement and enfranchisement within AMOD. These factors reflect the degree to which participant programmes are 'community-based'. High levels of community-involvement and enfranchisement are hypothesized to afford the development of the formal and informal social controls that may be necessary to alter environments in ways that will reduce levels of binge drinking and harms. Specifically we describe patterns of coalition membership, perceptions of problem salience and attribution of responsibility, partnered decision-making, buy-in to the programme model, environmental programme development, and substantive conflict. Other elements of the evaluation not discussed in this paper include survey-based behavioural surveillance measures of students at participant sites.

Data sources

The stakeholder survey or Key Informant Questionnaire (KIQ), asks participants about involvement, decision-making, perceptions of the problem and its solutions, expectations of success and

efficacy, conflict, communications and power. It is used to study the dynamics of change and experiences of change agents within sites. The KIQ is administered annually each fall. Coalition members and participants are identified for inclusion based on site records (mailing and contact lists and others). Questionnaires provide individual anonymity but have site identifiers. Completion is voluntary. Overall sample sizes and response rates were $n=389$ in 1999 (RR 64%, 46% to 84%) and $n=352$ in 2000 (RR 66%, 48% to 82%). In this paper we report about data from the 1999 and/or 2000 surveys both of which reflect early intervention years.

Programme tracking and observation aim to determine the nature of preventive activities and actions as they are implemented, as well as the barriers and facilitators encountered in programme development and implementation (Rossi & Freeman 1989). Demonstration programme evaluation requires careful characterization of the natural process of community change through specialized tracking and implementation measures (Gambone 1998; Rossi & Freeman 1989; Yin 1989). Tracking data are collected during regular meetings between on-site staff evaluators and key programme participants and validated against programme reports, minutes and other records. Interventions are characterized using a framework based on the public health model of agent-host-environment in the drug and alcohol context as described by Torjman (1986) and Geisbrecht, Krempulec and West (1993). Data for the present analysis reflect the period from the start of the programme (1997/1998) to spring 2001.

Formative findings: Dimensions of 'community-based' and environmental programmes

The degree to which AMOD projects are community-based and environmentally oriented is hypothesized to be reflected in: the diversity of coalition membership; partnered decision making across campus and community domains; perceptions about the environmental origins of binge drinking/harms; attribution of responsibility for addressing them to agents other than drinkers; development of environmental programmes that reflect community as well as campus investments; and, levels of substantive conflict. High levels of

community enfranchisement and environmental orientation are expected to prefigure success by signaling the capacity of coalitions to alter the formal and informal social controls necessary for changing student beliefs and behaviours to reduce consumption and harms.

Diversity in membership

KIQ survey data of coalition members reflect a high variability in membership characteristics among the ten sites. Data from the survey conducted in 1999 were chosen to reflect coalition characteristics at the earliest point of full coalition operation for all ten sites. Coalitions ranged in size from 16 members to 101. All coalitions had student representatives, and at eight of the ten sites these students were members of Greek-letter organizations. Nine of the ten coalitions had members of the university faculty serving on the coalition. The percentage of members from the community (compared with representatives from the campus) ranged from one-quarter to one-half. All of the coalitions had representatives from local government and six of the ten had a representative from state government. Four of the ten coalitions included landlords of student rental housing in the community and seven of the ten had alcohol merchants from the community.

Partnered decision making

Most coalition members across all ten sites reported that they were involved in coalition discussions (63% in 1999; 62% in 2000) and nearly half (45% in 1999; 42% in 2000) were involved in decision-making. The balance of power between campus and community groups is reflected in measures of influence over decision making within the coalitions. Overall, more than half of the AMOD coalition members reported that campus members had 'a lot' or 'all' of the influence over decision making (range 43–69% for the ten sites), while less than one-third (28%, range 4–57%) reported the same level of influence for community members, with campus and community members concurring on these patterns. These data suggest that campus members have a strong influence over the coalition, while input from the community is more variable. AMOD programme grants were awarded to the colleges and the programmes are predominantly housed and staffed on-campus.

This structural formality may have tilted the power toward on-campus members. Findings may also reflect that full-time staff members on the project tend to be regarded as being affiliated to the campus.

Perceived problem salience and attribution of responsibility

Nearly all coalition members agreed that college student binge drinking was a serious problem, both on-campus (84%) and in the community (80%). Although coalition members did not differ in their perception of the seriousness of the problem according to their affiliation (campus and community), there was a slight difference between identifying binge drinking as a 'very serious' problem on-campus (45%) compared with in the community (38%) in 1999. These differences disappeared in 2000 (46% on-campus vs. 45% in the community). The changes in the perception of the seriousness of the problem in the community between 1999 and 2000 may reflect greater familiarity with the extent of the problem in the community after working on the coalition.

Coalition members were asked to rank the top three groups who they thought were responsible for reducing binge drinking (table 1). In 1999, three years after the first wave of sites began their efforts and one year after the second wave began, the groups most often endorsed as responsible agents were: university administrators (endorsed by 61% of respondents), students (57%) and binge drinkers themselves (52%). No other group received endorsement by more than one-third of the respondents. Much further down the list were community leaders (19%), city officials (10%), local liquor outlets (26%) and the liquor industry (7%). One year later there was a slight increase among participants programme-wide in the endorsement of local liquor outlets as being responsible for reducing binge drinking (34%) and similar decreases in endorsement of the university administration (55%) and binge drinkers themselves (44%). However, the same general order of attributed responsibility remained. Student members of the coalition held slightly different perceptions of the top responsible agents. They were less likely to report that university administrators ($p < .05$) and city officials ($p < .05$) were responsible agents for decreasing binge drinking, while they were more likely to have local alcohol outlets ($p < .05$) in their

Table 1. Attribution of responsibility for reducing binge drinking, %

	Program Mean	Site									
		1	2	3	4	5	6	7	8	9	10
University Administration	61	62	81	48	62	58	65	46	66	68	49
Students	57	46	55	52	45	38	65	59	67	68	60
Binge Drinkers Themselves	52	69	43	56	55	43	51	44	58	50	57
Local Outlets	26	39	28	32	41	53	23	18	8	24	21
Community Leaders	19	31	15	16	17	48	28	18	6	15	15
Alcohol Educators	11	8	11	8	14	3	9	23	11	15	12
City Officials	10	8	15	12	14	28	7	9	6	3	6
Health Services	7	15	4	8	0	3	19	14	3	6	6
Liquor Industry	7	23	11	4	7	3	7	14	5	0	6

(Source: 1999 HSPH AMOD evaluation KIQ)

top three. This finding may be consistent with reports from students who would rather have alcohol retailers engage in self-policing of their sales practices than have a set of restrictions placed on them by outside groups. Overall, patterns reflect a strong early emphasis among coalition participants on attributing responsibility to individual drinkers and the institutions that house them rather than on the community and environmental supports of heavy alcohol use.

Endorsement of the environmental model

Respondents were asked to identify how important they believed a series of activities were both for their coalition as a whole and for themselves individually. Each response was independent and there was no ranking of the relative importance of each area for this question. Activities were grouped into interventions that reflected five different areas: individual, environmental-demand, environmental-supply, coalition public relations, and outreach/sustainability. A 75% threshold was chosen to reflect endorsement for an area. Table 2 displays these results.

Programme-wide among action areas that addressed the individual drinker, five of six listed areas were endorsed at the 75% threshold. None of the three environmental-demand action areas were endorsed and only one of nine environmental-supply action areas was endorsed. Individual reports of coalition priorities also reflect this emphasis on the individual. When coalition members were asked to identify the top three priorities for

their coalition, the most often identified action area was 'increasing alcohol-free activities'. 'Strengthening ties between the university and the community' also received high endorsement as a high coalition priority and may reflect an intermediate step required to launch further initiatives.

Environmental programme development

At the end of the 2000-01 school year participants in the AMOD programme had implemented 255 discrete interventions. The majority of the interventions were categorized as addressing the environment. A closer examination revealed that half of these environmental interventions addressed the sociocultural context that supports heavy alcohol use. Examples of interventions in this area include an organized letter writing campaign, a media campaign to lower tolerance for the second-hand effects of alcohol and other interventions to change social norms pertaining to alcohol use. Fewer interventions addressed the social determinants of alcohol use, including the advertising and promotion of alcohol (10 interventions), the availability of alcohol (32 interventions) or legal sanctions regarding alcohol misuse (25 interventions). No interventions in the AMOD program had addressed other features of alcoholic beverages, such as pricing and packaging by the close of the 2000-01 school year.

The majority of the implemented interventions originated exclusively from coalition members who represented the campus (45%; n=116) or campus members working in collaboration with

Table 2. Endorsement of Action Areas by Coalition Members

Action areas seen as important/ very important		
Individual	1999 %	2000 %
increase alcohol-free activities	84	88
provide programming at new student orientation	83	79
disseminate facts about 2nd hand effects of problem drinking to shift norms	81	83
design media campaign to reduce high-risk drinking and related harms	79	80
better prevention programming	79	78
better clinical counseling	60	65
Environmental – Supply	1999 %	2000 %
enforce existing penalties for adverse consequences of alcohol use & abuse	75	76
strengthen the enforcement that limits drinking minors	67	71
promote responsible beverage server training	63	69
work to limit advertising about alcohol	57	55
change laws and rules about alcohol's distribution and sales	50	50
work to eliminate price discounting (e.g., happy hours, 2-for-1 specials)	48	64
limit access to bars	47	43
work to limit/reduce the density of alcohol outlets	42	56
work to increase excise taxes on alcohol	22	23
Environmental Demand	1999 %	2000 %
provide/increase alcohol-free housing	65	57
provide academic enrichment	49	43
increase job opportunities	22	20

Source: HSPH AMOD evaluation KIQ

community members (46%; n=118). Fewer interventions originated from community members exclusively (8%; n=21). Interventions originating from campus members or collaborative campus and community groups were similar in nature.

A minority (40%) of all environmental programme interventions experienced no barriers to implementation, while a majority (80%) of individual programme interventions experienced no barriers. The major barrier comprised resistance

from students, among whom a vocal minority strongly opposed environmental programming. Other sources of resistance came from persons or groups who would be directly affected by changes in the sales, promotion and pricing of alcohol, including members of the local and national alcohol industry and students who are the targeted customers of alcohol outlets. The specific barriers experienced varied according to the type of environmental intervention enacted. Interventions that addressed the socio-cultural context had political barriers and resistance from students in 20% of the cases, while other environmental interventions experienced political barriers and resistance from students in 50% of the cases. In contrast, only 8% of interventions targeting the drinkers themselves experienced similar barriers. Lack of financial and personnel resources were cited as significant barriers to implementing interventions for about 10% of the implemented activities but they did not differ according to the type of intervention.

Post-implementation reaction to interventions showed similar patterns. Individually oriented interventions experienced a positive reaction in 41% of the cases and a mixed or negative reaction just 10% of the time. Interventions targeting the social-cultural context had a positive reaction in 60% of the cases and a mixed or negative reaction was noted in 17%. On the other hand, there were fewer positive reactions to interventions addressing other environmental targets (28%) and greater experience of mixed or negative reactions to interventions in this group (40%).

Substantive conflict

A large majority (72% in 1999, and 67% in 2000) of coalition members reported experiencing low to moderately low levels of conflict within their coalitions. Substantive conflict (as opposed to conflict around personality or style issues) was hypothesized to indicate growth and the dynamic tensions of planned change. As predicted, conflict was most intensely felt around issues related to: best change strategies (29% in 1999 and 30% in 2000), the nature of the alcohol abuse problem (1999: 25%; 2000: 24%), coalition vision and goals (1999: 23%; 2000: 20%), specific objectives (1999: 21%; 2000: 20%), and underlying community tensions (1999: 20%; 2000: 21%). Perhaps not surprisingly, tensions emerged around seminal events in the

lifecycles of coalitions and reflected startup, early evaluation feedback and 'evaluative diagnoses', as well as course corrections and advice from the national programme office.

Discussion

By design AMOD evaluation measures were developed to shed light on whether coalitions were community-based and the degree to which change agents endorsed and enacted efforts consistent with the environmental model.

In the formative years of the AMOD program, we found diversity in membership and the emergence of partnerships between campus and community stakeholders. When data were discussed with site stakeholders, patterns of community enfranchisement were reported by participants to have been greatly enhanced by the programme. Despite these gains, we nevertheless found perhaps greater than expected levels of adherence to traditional educational prevention models and patterns of individualized attribution of responsibility for the problem. This is consistent with the majority of prevention activities on U.S. college campuses (Wechsler et al. 2000b). We also found an emerging foundation of environmental programming. Patterns of programme development indicated early gaps in several supply-side areas however, including those pertaining to controlling price and promotions. Finally, there was evidence that conflict among coalition members was low, but most intensely felt around core issues of strategy, goals and partnership.

Programmes appeared to be on the road towards deeper environmental programme development. This picture of moderated readiness may not be surprising given the nature of the problem being addressed and the novelty of the environmental approach for coalition members most of whom were not trained in public health. Early opposition from targets of change efforts – students, local retailers and even larger interest groups reflecting the alcohol industry – may have affected readiness.

Several formative lessons were learned from these data. First, orienting programme participants to a model of environmental change, its rationale and methods is difficult and time consuming but may be crucial for a programme's earliest development. Being able to identify gaps in under-

standing about the programme model, its rationale and component strategies may be instrumental in assessing readiness, identifying needs for technical assistance, providing support for participants and staffing projects. Second, generating endorsement of and enacting specific environmental approaches is time consuming and requires that coalitions overcome multiple barriers. Building into an evaluation a method for assessing model endorsement and development appears to be important even within a programme whose participants select the environmental model. Participants' incomplete understanding of the model and their sensitivities to negative short-term feedback from key constituencies (including students and local business owners) probably challenged programme development and moderated readiness. For example, we observed significant external resistance to implementation of environmental interventions compared with interventions targeting individual students or drinkers. At some sites, industry counter-activism was also a barrier. Third, achievements and developments take time. Short-term efforts may not allow coalitions to develop the levels of community-involvement and enfranchisement expected to presage environmental and behavioural change around alcohol use and attendant harms.

Fostering exchange between research and action is always challenging but it's an integral part of demonstration research. Developing tools and techniques to facilitate this exchange are crucial. In AMOD the exchange has enhanced the potential for programme participants to reflect on recruitment of key constituencies and tap the expertise and perspectives of underutilized members. Because all AMOD data are shared with participant sites by formal and informal means, programme leaders can look at data and develop programmes for their own coalition members to educate them about the potential effectiveness of environmental interventions (outcome expectations) and serve as coaches to enhance efficacy beliefs about implementation of selected interventions in the face of resistance from outside sources. Feeding back tracking data can provide programme and coalition leaders with information about implemented interventions to help leaders characterize programme efforts at their sites and identify barriers to overcome. Finally programme evaluation data can serve to bridge campus, community and other coalition members' perspectives to achieve greater programme unity and progress.

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