DRINKING AND MOTIVATIONS TO DRINK AMONG ADOLESCENT CHILDREN OF PARENTS WITH ALCOHOL PROBLEMS

MELANIE CHALDER*, FRANK J. ELGAR† and PAUL BENNETT‡

Department of Community Based Medicine, University of Bristol, Bristol BS6 6JL, UK, 1Department of Family Social Sciences, University of Manitoba, Winnipeg, Canada and 2Department of Psychology, University of Wales Swansea, Swansea, UK

(Received 27 January 2005; first review notified 24 February 2005; in final revised form 25 August 2005; accepted 28 August 2005; advance access publication 20 October 2005)

Abstract — Aims: To study the influences of parental alcohol problems on adolescents’ alcohol consumption and motivations to drink alcohol. Methods: A community sample of 1744 adolescents from schools in South Wales completed the 6-item Children of Alcoholics Screening Test, Drinking Motives Questionnaire, and survey measures of alcohol consumption. Results: Children of parents with alcohol problems constituted almost one-fifth of the sample group and were found to drink more frequently, more heavily, and more often alone than children of parents without alcohol problems. Parental alcohol problems were also related to internal motives to drink (e.g. coping) in their adolescent children. Across the entire sample, internal motives to drink interacted with parental alcohol problems in predicting alcohol consumption and drinking frequency. Conclusion: Parental alcohol problems appeared to co-exist with an asocial pattern of alcohol consumption in adolescents that involves drinking alone and drinking to feel intoxicated or to forget about problems. In addition to the external, social motives to drink, which are shared by most adolescents, nearly one in five of the adolescents studied reported salient internal motives to drink that tended to coexist with alcohol problems in their parents.

INTRODUCTION

The risk posed to children of parents with alcohol problems of experiencing emotional or behavioural difficulties or becoming involved in substance misuse have been thoroughly investigated (Chassin et al., 1996; Johnson and Leff, 1999; Velleman and Orford, 2001).1 An early study by Kandel et al. (1978) found that 82% of drinking parents raised offspring who also drank and that 72% of families who abstained from drinking alcohol had children who also abstained. Similarly, Kushner and Sher (1993) compared the children of parents with alcohol problems with those without such problems and found the former were twice as likely as other children to show symptoms of an alcohol use disorder. According to the most recent Diagnostic and Statistical Manual (DSM-IV-TR; American Psychiatric Association, 2000), the offspring of parents diagnosed with alcoholism are up to four times more likely to develop alcohol-related problems than individuals in the general population.

Research has identified several mechanisms involved in transmitting the risk of problem drinking from parents to their offspring—genetics, physiological sensitivity to the effects of consumption (Kaplan et al., 1988), psychosocial factors such as modelling substance misuse by parents, family dysfunction, negative affect, anxiety sensitivity, availability of alcohol, and poor parental monitoring (Hussong et al.,1998; MacPherson et al., 2001). An alternative explanation of problem drinking in adolescents, including the children of parents with alcohol problems, relates to psychological motivations to use alcohol and expectancies about its effects (Cooper, 1994). Adolescents often engage in risk-taking behaviours and thus may be motivated to experience the physiological or psychological enhancement gained by using alcohol (Beck et al., 1995). However, other research indicates that some adolescents (particularly females) may consume alcohol to cope with negative feelings, (Carman et al., 1983; Kandel et al., 1991; King et al., 1996) while for others (particularly males) drinking is tied closely to social conformity motives (Cooper, 1994).

Understanding how adolescents’ drinking habits and motivations to drink relate to family histories of alcohol problems provides important opportunities for clinical intervention and health policy. Unlike genetically based vulnerabilities to misuse alcohol, psychological motivations and behaviours are amenable to the kinds of psychosocial interventions that can be delivered to individuals or to groups of high-risk children who may be affected by problem drinking by parents. A useful way of conceptualizing drinking motivations was provided by Cox and Klinger (1988). Their model is based on basic operant learning principles and describes drinking as a rational, purposeful behaviour in which the individual chooses to drink because he or she expects that positive affect will be enhanced, negative affect will be reduced, or both. Essentially, a person’s drinking is governed by balancing expected positive affective consequences of using alcohol with expected negative affective consequences. However, it emphasizes the need to view drinking behaviour in the context of other goals and incentives in people’s lives and that biological, psychological, environmental, and cultural variables can all influence an individual’s expectations about how choosing to drink will change their overall affect. Based on this understanding, Cooper (1994) developed the Drinking Motives Questionnaire (DMQ) to assess adolescents’ motives to drink across four specific domains: social, enhancement, coping, and conformity. Social and enhancement motives are considered positive motives for alcohol, while coping and conformity motives are considered to be negative motives. The DMQ also categorizes motives to drink as being either internal or external; enhancement and coping motives being internally...
generated and social and conformity motives being externally
generated.

Research supports both the construct and convergent valid-
ity of the DMQ in adolescents (Cooper, 1994) but there are few
data available on its psychometric properties among young people at risk for alcohol problems. The DMQ may pro-
ve useful in studying whether drinking motives in adoles-
cent offspring of parents with alcohol problems differ from
individuals in the general population. Given that this group
is more likely than others to witness drinking and intoxication
at home and to drink themselves as a consequence of this, it
is also possible that they would be more likely to drink as a
means to manage stress and negative feelings (i.e. coping)
than other groups. In the language of Cox and Klinger
(1988), such children may report stronger internal motives to
drink than children from homes with no evidence of alcohol-
related problems.

The goal of the present study was to screen for parental
alcohol problems in a sample of adolescents and compare chil-
dren of parents with alcohol problems to those with no evid-
ence of abuse in relation to regard to alcohol consumption
and motives to drink. A secondary objective was to test the
criterion validity of the DMQ in this population using meas-
ures of reported alcohol consumption. It was hypothesized
that children of parents with alcohol problems would report
greater alcohol consumption and stronger internal motives to
drink than those without this background. It was also hypo-
thesized that the influence of parental alcohol problems on
drinking frequency and alcohol consumption would be exacer-
bated (i.e. moderated) by internal motives to drink.

SUBJECTS AND METHODS

Subjects

A community sample of 1744 adolescents was recruited from
nine secondary schools in South Wales as part of the Teenage
Alcohol Project (TAP), a pilot study for a randomized trial of a
school-based intervention designed to reduce binge-drinking
in young people (Chalder and Moore, 2003). These schools
comprised a stratified sample, broadly representative of the
state secondary schools in the Gwent and Bro Taf Health
Authority areas of Wales, in terms of geographic location,
school size, free school meal entitlement, and educational
attainment. The study recruited pupils between years 8 and 9,
subject to parental opt-out (0.9%) and written pupil consent
(99.3%). The sample was 48.9% female and had a mean age
of 13.7 (SD = 0.7, range 13–15) years. Participants were not
paid but schools were financially compensated for facilitating
the data collection.

Measures

Parental alcohol problems. The abbreviated Children of
Alcoholics Screening Test (CAST-6; Hodgins et al., 1993) is a
6-item self-report measure of the degree of psychological
distress associated with parental drinking behaviour, family
discord related to parental alcohol consumption, and attempts
to control or escape from parental drinking. The six items were
factor analytically derived from the original 30-item version
of the scale (Jones, 1983) and require respondents to rate
statements as either ‘true’ or ‘false’. The items are: ‘Have
you ever thought that one of your parents had a drinking
problem? Did you ever encourage one of your parents to quit
drinking? Did you ever argue or fight with a parent when he
or she was drinking? Have you ever heard your parents fight
when one of them was drunk? Did you ever feel like hiding
or emptying a parents’ bottle of liquor? Did you ever wish
that a parent would stop drinking?’ The CAST-6 reliably dis-
riminates between children of alcoholic parents and children
of non-alcoholic parents and has been shown to demonstrate a
high degree of internal consistency and test–retest reliability
in young adolescents (Havey and Dodd, 1995) as well as other
populations (Hodgins et al., 1993). Hodgins and Shrimp
(1995) found good cross-validity of the CAST-6 showing
high correlations with the 30-item version (r = 0.92–0.94)
and agreement to other longer screening measures, yielding
97% accuracy with its recommended cut point of three or
more items endorsed.

Drinking motives

The DMQ (Cooper, 1994) is a 20-item self-report measure
based on Cox and Klinger’s (1988) four-factor model of
motives to drink alcohol. Items describe internal (coping
and enhancement) and external (social and conformity) motives.
Respondents are asked to rate the relative frequency of drink-
ing associated with each of 20 motives to drink on a 5-point
scale (1 = ‘almost never/never’, 2 = ‘some of the time’, 3 =
‘half of the time’, 4 = ‘most of the time’, and 5 = ‘almost
always/always’). Sample items include: ‘Because it helps
you enjoy a party’ (Social), ‘Because it helps you when you
feel depressed or nervous’ (Coping), ‘Because you like the
feeling’ (Enhancement), and ‘So you won’t feel left out’
(Conformity). Each factor score ranges from 5 to 25 with
higher scores reflecting stronger motivation. Cooper (1994)
found that each drinking motive related to a distinct pattern
of contextual antecedents and drinking-related outcomes
among American adolescents and that these relationships did
not vary significantly by age, gender, or race.

Alcohol consumption

The TAP questionnaire included a number of other measures
demographics, drinking contexts, and episodes of drunken-
ness. Among these was a 7-day drink diary that recorded the
number and type of alcoholic drinks consumed on each day
of the previous week. These data were later converted to a
continuous measure of alcohol units consumed. Also meas-
ured were the number of days during the previous week on
which alcohol was consumed (drinking frequency).

Socioeconomic status

Socioeconomic status was measured using the Family Afflu-
ence Scale (FAS; Currie et al., 1997), a brief measure of
material wealth comprising three items, ‘Does your family
have a car or a van?’ (no = 0, yes = 1, yes, two or more = 2),
‘Do you have your own bedroom?’ (0 = no, 1 = yes) and
‘During the past year, how many times did you travel away
on holiday (vacation) with your family?’ (0 = not at all, 1 =
onece, 2 = twice, 3 = more than twice). These items produced
an ordinal scale ranging from 0 (lowest affluence) to 6 (highest
affluence). The FAS is less subject to non-response than other
child self-report measures of parental occupational status (Currie et al., 1997) and has demonstrated good criterion validity. In previous research, the FAS showed a 3-fold increase in the likelihood of poor health attributable to low socioeconomic status (Torsheim et al., 2004).

**Procedure**

Participants were surveyed in assembly-hall settings, under examination conditions, on three separate occasions: at baseline, 1 month after the intervention, and 6 months following the intervention. The data discussed in the present study originate from the final post-intervention data cycle since this was the only data cycle to include both the DMQ and CAST-6. Code numbers were used to identify participants within the study, in order to preserve anonymity and ensure confidentiality.

**Data analysis**

Data were entered using SPSS 11.5 DE module and subsequently analysed using SPSS 12.0 (Chicago, IL) and EQS 6.0 (Multivariate Software, Encino, CA). Analyses were adjusted for any effects of the TAP intervention (fixed effect) or school clustering (random effect). Children of parents with alcohol problems were identified using the recommended criteria of three or more items endorsed on the CAST-6. Group comparisons were conducted using between-groups ANOVAs and \( \chi^2 \)-tests. Confirmatory factor analysis (CFA) was used to verify the 4-factor structure of the DMQ. To test the effects of parental problem drinking and gender on drinking frequency and motives to drink, 2-way ANOVAs were used with error terms, adjusted for a random effect of school cluster. The moderating effects of drinking motives in the relations between parental alcohol problems and drinking were tested using regression with interaction terms (Baron and Kenny, 1986). Equal weights were used for all units within each level.

**RESULTS**

A total of 312 participants (18.2% of the sample) were classified as children of parents with alcohol problems. No age, gender, or school cluster differences were found between this group of children and children from families without evidence of alcohol-related problems. However, children of parents with alcohol problems were more likely to report drinking two or more alcoholic drinks per week, to have been drunk during the past 3 months, or to expect to get drunk again during the next two weeks (Table 1). They were also more likely than children from families without alcohol problems to drink alone, although the majority of alcohol was consumed in social situations irrespective of group. With regard to the reasons provided for using alcohol, a higher proportion of children of parents with alcohol problems reported drinking ‘to forget their problems’ and drinking ‘to get drunk’. They were also less likely to indicate that they drank because they liked the taste of alcoholic drinks.

The groups were compared with respect to their motives to drink and consumption of alcohol. Table 2 shows descriptive statistics on data from the four DMQ factors, alcohol consumption (units consumed during previous week), and drinking frequency (days drinking during the previous week). The internal consistency of DMQ factors was adequate (\( \alpha = 0.77–0.91 \)) and correlations among the four factors were positive and statistically significant (Table 3). CFA of the four-factor structure of the DMQ showed an adequate fit to the model to our data, \( \chi^2 \) (df = 164) = 2053.1, \( P < 0.01 \), Bentler–Bonett normed fit index (NFI) = 0.90, comparative fit index (CFI) = 0.90, and error estimations were low, standardized root mean square residual (RMSEA) = 0.09 [95% confidence interval (CI) = 0.05–0.12].

ANOVA showed that children of parents with alcohol problems reported significantly stronger coping, enhancement, and conformity motives to drink than those from families with no reported alcohol-related problems (Table 4). These children also reported drinking more often and consuming more alcohol during the previous week (Table 5).

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**Table 1.** Alcohol consumption by adolescents of parents with and without alcohol problems

<table>
<thead>
<tr>
<th>Parental alcohol problems (%)</th>
<th>No parental alcohol problems (%)</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumption and drunkenness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usually drink two times a week or more</td>
<td>22.8</td>
<td>16.5</td>
</tr>
<tr>
<td>Was a little drunk in past 5 months</td>
<td>67.5</td>
<td>61.2</td>
</tr>
<tr>
<td>Was seriously drunk in past 3 months</td>
<td>44.0</td>
<td>35.7</td>
</tr>
<tr>
<td>Will drink in next 2 weeks</td>
<td>54.1</td>
<td>51.1</td>
</tr>
<tr>
<td>Will get little bit drunk in next 2 weeks</td>
<td>36.0</td>
<td>30.1</td>
</tr>
<tr>
<td>Will get seriously drunk in next 2 weeks</td>
<td>18.2</td>
<td>11.1</td>
</tr>
<tr>
<td><strong>Drinking context</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usually drink with friends</td>
<td>65.0</td>
<td>58.7</td>
</tr>
<tr>
<td>Usually drink with relatives</td>
<td>59.2</td>
<td>64.1</td>
</tr>
<tr>
<td>Usually drink with girlfriend/boyfriend</td>
<td>18.5</td>
<td>14.5</td>
</tr>
<tr>
<td>Usually drink alone</td>
<td>9.2</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>Reason for drinking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drink to get a little bit drunk</td>
<td>30.5</td>
<td>33.7</td>
</tr>
<tr>
<td>Drink to get seriously drunk</td>
<td>21.1</td>
<td>12.0</td>
</tr>
<tr>
<td>Drink to forget my problems</td>
<td>15.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Drink because I like the taste</td>
<td>32.6</td>
<td>47.9</td>
</tr>
</tbody>
</table>

\*\( P < 0.05; \)**\( P < 0.01; \)**\( P < 0.001.\)

**Table 2.** Mean (SD) motivations to drink in adolescents of parents with and without alcohol problems

<table>
<thead>
<tr>
<th>Motivations to drink</th>
<th>Parental alcohol problems</th>
<th>No parental alcohol problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>Social</td>
<td>2.47 (1.16)</td>
<td>2.43 (1.12)</td>
</tr>
<tr>
<td>Coping</td>
<td>2.00 (1.08)</td>
<td>2.00 (1.05)</td>
</tr>
<tr>
<td>Enhancement</td>
<td>2.38 (1.29)</td>
<td>2.31 (1.25)</td>
</tr>
<tr>
<td>Conformity</td>
<td>1.92 (1.01)</td>
<td>1.55 (0.80)</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>6.60 (12.63)</td>
<td>7.69 (12.65)</td>
</tr>
<tr>
<td>Median</td>
<td>0.00</td>
<td>0.90</td>
</tr>
<tr>
<td>Drinking frequency</td>
<td>1.43 (1.80)</td>
<td>1.55 (1.65)</td>
</tr>
<tr>
<td>Median</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Irrespective of parental alcohol problems, females were found to consume more units of alcohol than males although there were no apparent gender differences in terms of drinking frequency. Males, however, did show significantly stronger conformity motives to drink than females. There were no interactions of gender and parental alcohol problems associated with motivations to drink, alcohol consumption, or drinking frequency.

Regression analysis was used to study the influences of parental alcohol problems and motives to drink on drinking frequency (Table 6) and alcohol consumption (Table 7). The CAST-6 was a continuous variable in these analyses representing the magnitude of parental alcohol problems across the sample (M = 1.17, SD = 1.67, $\alpha$ = 0.81). Table 6 shows parental alcohol problems related to drinking frequency after adjustment for gender, age, TAP intervention, and school clustering. Coping and enhancement motives to drink also predicted drinking frequency while social and conformity motives to drink did not. More importantly, the interactions of parental alcohol problems and social, enhancement, and conformity motives to drink were each predictive of drinking frequency above and beyond their added influences, indicative of an exacerbating effect of these motives on the relation between parental alcohol problems and adolescent drinking. The moderating effect of parental alcohol problems and motives to drink accounted for 65% of the variance in drinking frequency.

A similar pattern was found in the influences of parental alcohol problems and drinking motives on alcohol consumption (Table 7). Coping and enhancement motives predicted overall consumption, while the interaction between parental alcohol problems and drinking motives was additionally predictive of consumption, accounting for 42% of the variance in consumption. However, only coping motives to drink seemed to exacerbate the influence of parental alcohol problems on consumption while conformity motives to drink appeared to attenuate this relationship.

**DISCUSSION**

The objective of this study was to compare adolescent children of parents with alcohol problems with those from families without such problems, with regard to their self-reported consumption of alcohol and motivations to drink. The results demonstrate strong support for the three research hypotheses. First, parental alcohol problems were related to adolescents’ use of alcohol. Second, children from families with alcohol-related problems were more likely to show greater internalizing motives to drink alcohol than those from families without such problems. Third, internal motives to drink (coping and enhancement) moderated the influence of parental drinking problems on alcohol consumption. These findings build upon previous research on the health and health behaviours of this population.
First, parental alcohol problems were associated with drinking frequency, alcohol consumption, and episodes of drunkenness among their adolescent children. A troubling, asocial pattern of drinking emerged among children of parents with alcohol problems that involved drinking alone, drinking to feel intoxicated, and drinking to forget about problems. Behaviours such as these, if left unchecked, have the potential to develop into more serious problems with alcohol use in adulthood. Parental influences on adolescents’ drinking behaviour may be mediated by biological mechanisms that govern physiological sensitivity to alcohol (Kaplan et al., 1988), psychological factors such as anxiety sensitivity, negative affect, and modelling the misuse of alcohol (Eiden and Leonard, 1996; MacPherson et al., 2001), or environmental factors such as availability of alcohol, inadequate parenting, or family dysfunction (Hussong et al., 1998; Newlin et al., 2000). All these dimensions of parental alcohol problems, in combination with adolescents’ tendencies to engage in risky behaviour, might have contributed to the frequent and heavy use of alcohol, which was reported by children of parents with alcohol problems.

Second, children of parents with alcohol problems showed stronger coping and enhancement motives to drink than other children in our sample. Drinking to feel the intoxicating effects of alcohol and drinking as a means to cope with negative feelings predicted both drinking frequency and alcohol consumption, even after controlling for the effects of parental alcohol problems. These trends are especially disconcerting given these children’s tendency to drink more often and in larger quantities than children of parents with no evidence of alcohol problems and also because internal motives to drink can lead to greater difficulties with alcohol than drinking for external, social reasons (Cooper, 1994). Current psychological theories and treatments of alcohol problems emphasize the context in which drinking occurs and personal motives to use alcohol. Previous studies suggest that these motives are shaped by both environmental and biological factors. For instance, Newlin et al. (2000) found that parents who drink...
as a means to manage negative feelings model this coping behaviour to their children and a recent twin study found that drinking to cope with negative feelings can be partly accounted for by genetic factors (Prescott et al., 2004). In either case, the present study lends additional evidence to the case that ‘how often’ young people drink, ‘how much’ they drink, and ‘why’ they drink are all influenced by parental behaviour.

Third, regression analyses showed large moderating effects of motives to drink on the influence of parental alcohol problems on adolescent drinking behaviours and, more importantly, showed differential interactions on drinking frequency and alcohol consumption. Social, enhancement, and conformity motives to drink all moderated the effects of parental alcohol problems on drinking frequency, each apparently exacerbating the influence of parental symptoms on adolescent drinking. However, only coping motives appeared to exacerbate the influence of parental alcohol problems on alcohol consumption while conformity motives to drink seemed to attenuate this influence on consumption. These effects suggest two things: that children of parents with alcohol problems who are externally motivated to drink or who drink simply to feel intoxicated, drink more often than those who do not have these motives and that children of parents with alcohol problems who drink solely to cope with negative feelings tend to consume more alcohol than those who do not drink for this reason. The combination of parental alcohol problems and coping motives to drink appeared to be particularly potent in terms of heavy drinking by adolescents.

In addition to supporting the three research hypotheses, we observed that the DMQ has good criterion validity in its prediction of alcohol consumption by adolescents. The psychometric properties of the DMQ and the moderation effects shown here suggest that the DMQ could be a useful process measure in intervention studies, which aim to reduce problem-drinking in young people. Consistent with Cooper’s (1994) data, males showed stronger conformity motives to drink than females but a gender difference was not found in internal motives. Further study involving a wider age range of participants may be required to determine whether females are indeed more internally motivated to drink than males.

The strengths of this study are its large sample size, high consent rate, and rigorous sample stratification, which all give external validity of the findings. Another strength is its use of validated measures of parental alcohol problems and motives to drink that, in combination, lend a unique insight into why their children are at risk of developing their own problems with alcohol. However, the cross-sectional, observational nature of the study precludes firm conclusions about the direction of influences and developmental changes and, given the narrow age range of the sample, it was not possible to replicate age effects in alcohol use and drinking motives reported elsewhere (Bradizza et al., 1999; Hussong et al., 1998). Also, no data were available to study sibling groupings and interactions between children’s gender and parent gender. However, the observation that boys are more affected by their fathers’ misuse of alcohol than their mothers’ and that girls, conversely, are more affected by their mothers’ misuse of alcohol than their fathers’ (Velleman and Orford, 2001) could usefully be explored in future studies on adolescents’ motives to use alcohol.

With these caveats in mind, there are notable practical implications to these findings. Nearly one in five adolescents screened positive for exposure to parental alcohol problems and those identified as children of parents with alcohol problems showed a distinct, maladaptive pattern of drinking and motives to drink. There is good reason for concern for the health and social development of these young people. Of course, not all such children will inevitably have difficulties that can be attributed to parental drinking. Many do not develop any problems or mature out of their problems in their early adult years (Velleman and Orford, 2001). Research has identified a number of factors that can moderate the effects of parental drinking problems on adolescent functioning: high self-esteem or self-concept; a nurturing relationship with a non-alcoholic parent, sibling, or other family member; an internal locus of control; few stressful events in infancy; communication skills; and family cohesion (Jennison and Johnson, 2001; Velleman and Orford, 2001). Understanding how these resilience factors interact with motivations to drink may indeed hold the best promise for effective future interventions for children and families (Cox and Klinger, 2002).

Acknowledgements — The authors thank the teachers and pupils of all the schools involved in the Teenage Alcohol Project. This study was funded by research grants from the Alcohol Education Research Council, the Welsh Assembly Government, and the Bro Taf Health Authority.

REFERENCES


