**Parents’ drinking motives and problem drinking predict their children’s drinking motives, alcohol use and substance misuse**

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**Abstract**

The aim of the current study was to test the direct and indirect influence of parents’ drinking motives and problem drinking on their children’s drinking motives, alcohol use and substance misuse. Cross-sectional analysis of parent and child drinking patterns and motives, derived from the nationally representative Drinkaware Monitor panel survey. The sample comprised a total of 148 couples of parents and child. Path analysis revealed that children’s alcohol use and substance misuse were influenced by their own drinking motives and parents’ problem drinking. Parents’ conformity motives were linked to their children’s conformity motives. Finally, parental drinking problems mediated the effect of their coping motives on their childrens’ alcohol use and substance misuse. In conclusions, parental drinking styles relate to their children’s alcohol use and substance misuse through problem drinking and drinking motives.

**Key words**: alcohol; children; drinking motives; parents; path analysis; problem drinking; substance misuse.

**1. Introduction**

Risky use of alcohol and other drugs amongst young people has been associated with several negative consequences, such as academic failure, violence, brain damage, later excessive use, alcoholism, and early mortality (Bendtsen, et al., 2014; Danielsson, Wennberg, Hibell, Romelsjo, 2012). A large body of literature has identified the most important risk factors for young people’s alcohol and other drug use, including contextual factors (i.e., substance availability, country policies about age restrictions; Callaghan, Gatley, Sanches, Benny, & Asbridge, 2016; de Looze, Raaijmakers, et al., 2015), interpersonal factors (i.e., interactions with family members and peers who often drink; Cleveland, Gibbons, Gerrard, Pomery, & Brody, 2005), and individual factors (i.e., personal drinking attitudes and motives; Kuntsche & Kuntsche, 2009; ter Bogt, et al., 2014). Among the dimensions explaining the development of young people’s drinking and substance use, such as family influences (Windle, 2000; Barnes & Welte, 1990) and drinking motives (Mazzardis, Vieno, Kuntsche, & Santinello, 2010; Windle, 2000; Cooper, Frone, Russell, & Mudar, 1995) have been widely studied.

In the United Kingdom, over the past two decades, there have been trends towards significantly lower levels of both alcohol and other drug use amongst young people. For instance, a recent survey of young people (Hawkins, 2012) demonstrated that between the period 2001-2014, the proportion of 11-15 year olds who have ever tried alcohol has dropped from 61% to 38%. In the same period, reports from this age group of ever having tried other drugs has fallen from 29% to 15%. Understanding the drivers for such trends is important to ensure that further decreases in alcohol and other drug use can be reinforced and further realised amongst young adolescents.

To our knowledge no previous studies have examined the relationship between parental drinking motives and problem drinking, and the drinking motives, alcohol use and substance misuse of their children, in a single study. The aim of the present study was therefore to investigate the possible relationships between these variables.

*1.1. Drinking Motives*

According to the Motivational Model of Alcohol Use (Cox & Klinger, 1988, 1990), motives are among the most proximal factors for engaging in drinking behaviour for both adolescents and adults, because people engage in such behaviour to achieve expected or desired effects. In this model, four motives result from crossing two orthogonal dimensions: (1) positive or negative valence (i.e. increasing or decreasing positive or negative affect engaging in drinking behaviour); and (2) internal or external source of the expected affective change (in respect to one’s own sensations or to significant others, respectively). The resulting four motives are: (i) enhancement (positive valence and internal source; that is, to expect to enhance positive affect by drinking alcohol); (ii) coping (negative valence and internal source; that is, to expect to diminish bad feelings by drinking alcohol); (iii) conformity (negative valence and external source; drink alcohol because of peer pressure to do it); and (iv) social (positive valence and external source; that is, to expect to improve contact and relationships with friends).

In the current study, we included coping and conformity motives as predictors of both parental alcohol problems and child outcomes for both alcohol use and substance misuse. We focused on these two negative-valence motives after Windle (2000) who found that drinking to relieve negative affect and to avoid adverse conditions may be directly linked to alcohol use and problems.

*1.2. Intergenerational transference of alcohol use*

A substantial literature has documented the relationship between parents’ drinking and their children’s alcohol use. That is young people with parents who often drink tend to drink more than their peers (Mares, Stone, Lichtwarck-Aschoff, & Engels, 2015; Vermeulen-Smit, Koning, Verdurmen, Van der Vorst, Engels, & Vollebergh 2012; White, Johnson, & Buyske, 2000). Possible explanations for the intergenerational transference of alcohol use behaviours are grounded in the social cognitive model (Bandura, 1986) and the cognitive model of intergenerational transference (Campbell & Oei, 2010). The former model broadly argues that we learn behavioural patterns from observation of parental behaviours and resulting outcomes (i.e. they model their behaviour on other agents, in particular parents). The latter model, more specifically, proposes that such influence might be attributed to the formation of a child’s positive alcohol-related expectancies in line with their parents’ alcohol behaviours. In other words, parental alcohol use may shape children’s drinking behaviour not only directly, such as through modelling, but also through cognitions, such as positive beliefs about alcohol use (Bandura, 1986) and, in turn, drinking motives (Kuntsche, Knibbe, Engels, & Gmel, 2007; Kuntsche, Wiers, Janssen, & Gmel, 2010; Müller & Kuntsche, 2011). In support of this view, Van Damme and colleagues (2015) found an indirect effect of parental drinking on children’s drinking via their own drinking motives, suggesting that parents’ alcohol behaviour may constitute a distal predictor for children’s alcohol use. It is worth noting that not all research in this area has demonstrated a clear link between parent and child drinking. For example, a recent report using data from the UK Millennium Cohort Study (Kelly, Britton, Cable, Sacker, & Watt, 2016) sought to identify determinants of heavy drinking and drunkenness amongst 11 year olds. The authors found no significant associations between parental drinking and child drunkenness, although this might be in part due to a limited sample size with regards to the proportion of children who reported experiencing drunkenness.

In the current study we tested the direct and indirect (via children’s motives) influence of parents’ problem drinking on children’s alcohol use and substance misuse. Additionally, we tested whether parental drinking motives were also associated with their children’s drinking motives.

*1.3. Aim of the current study*

In sum, in this study, both parental and children’s drinking motives, as well as parental problem drinking and children’s alcohol use and substance misuse, are embedded in a multivariate model to evaluate: (a) the effects of distal (i.e. parental problem drinking and drinking motives) and proximal (i.e. child drinking motives) predictors on child alcohol use and substance misuse; and (b) the influence of parents’ drinking motives on their children’s drinking motives.

**2. Methods**

*2.1. Data*

This study used data from the 2014 Drinkaware Monitor Survey (DMS; Ipsos MORI, July 2015), which is a survey of alcohol-related behaviours based on a nationally representative sample of adults, conducted on behalf of the Drinkaware Trust by the polling organisation, Ipsos MORI. The 2014 DMS sampled 2,294 adults (aged 18-75). Among them, 527 parents were asked for permission to also survey their children with regards to alcohol and other substance use. From this sample, permission was granted and data was subsequently collected from 325 children (aged 10-17). After screening for and removing participants from the dataset based on missing values from variables of interest to this study, and also removing children who reported not having consumed alcohol at least once in the past 12 months (N= 63), a final sample of 148 parent-child pairs was identified.

*2.2 Participants*

The present study sample comprised 148 parents and their children (total *n* = 296). Table 1 provides a breakdown of the key demographics for this group. Data regarding social grade are based on the National Readership Survey (NRS) classification system, and the distribution for the present sample is comparable to the current profile across the UK – this is by design and as a consequence of the sampling methodology used by Ipsos MORI to ensure a nationally representative sample was achieved in the main survey.

*2.2. Measures*

*2.2.1. Parent and child measures*

*Drinking motives*. The Drinking Motives Questionnaire-R (DMQ-R; Kuntsche & Kuntsche, 2009) was completed by all participants. The scale comprised 12 items concerning four distinct motives (i.e. enhancement, social, conformity, and coping motives). Participants (children and their parents) were asked to consider all the times they had consumed alcohol in the last 12 months and to indicate on how many occasions they drank for each given motive. Each motive consists of 3 items and is rated on a 3-point scale ranging from “Never” (coded as 1) to “Almost always” (coded as 3). As explained above, coping and conformity motives were included in the current study. The Cronbach’s αs for parents’ coping and conformity subscales were .94 (95% CI .93-.96), and .91 (95% CI .88-.93) respectively. The Cronbach’s α for children’s coping and conformity subscales were .94 (95% CI .92-.96) and .95 (95% CI .93-.96).

*2.2.2. Parent measures*

*Alcohol Use.* The Alcohol Use Disorder Identification Test (AUDIT; Saunders, Aasland, Babor, De la Fuente, & Grant; 1993) was used to measure drinking and potential harmful drinking amongst the adult sample. The AUDIT consists of 10 questions measuring the individual’s level of risk and/or harm in relation to alcohol consumption patterns. Each item carries a score of 0-4, which gives an individual an overall AUDIT score between 0 and 40. The Cronbach’s α for the scale was .92 (95% CI .90-.94).

*Social grade.* Information regarding social grade, in relation to the NRS, was obtained by asking participants to indicate, from a list of 95 categories, the closest match to their current occupation. Each of these categories were predefined under the 6-item scale of the NRS, from A – E.

*2.2.3. Adolescent measures*

*Frequency of alcohol use.* Participants were asked to rate how often they have a drink containing alcohol on a 9-point scale from “rarely” to “six or more times a week”.

*Alcohol and substance abuse.* The CRAFFT Screening Tool for Adolescent Substance Abuse (Dhalla, Zumbo, & Poole, 2011) was used. This brief screening instrument consists of a series of 9 questions (yes/no answer) developed to screen adolescents for Alcohol Use Disorder and Substance Use Disorder simultaneously. As a consequence, subsequent analysis of this variable does not distinguish between substance misuse and alcohol misuse separately, but this is treated as a combined measure in the CRAFFT. The Cronbach’s αfor the scale was .87 (95% CI .83-.90).

**2.3. Analyses**

Correlation analyses were conducted in order to test the associations between the variables of interest. Path analysis (i.e., structural equation modelling for observed variables) was used to examine the pattern of relationships observed, using the Lavaan package (Rosseel, 2012) of software R. A single observed score for each construct was included in the model. Specifically, the covariance matrix of the observed variable was analyzed with the Maximum Likelihood method estimator. A bootstrap approach (5000 bootstrap samples) was used to calculate bootstrapped confidence intervals to test for mediation. To evaluate the goodness of fit of the model we considered the *R*2 of each endogenous variable and the total coefficient of determination (TCD; Bollen, 1989; Jӧreskog & Sӧrbom, 1996).

**3. Results**

Table 2 shows the means, standard deviations and bivariate correlations between the variables included in the study. As expected, most of the study variables were correlated with each other in the hypothesized directions. In particular, a strong positive correlation was found between parents’ problem drinking and parents’ motives for drinking, and between children’s substance misuse and their motives for drinking. Moreover, positive correlations were found between parents’ and children’s drinking motives and between parents’ and children’s motives and their levels of alcohol use.

The tested model included all the variables of interest. Several path coefficients did not reach statistical significance and were characterized by a small effect size: the link between parents’ gender and social grade and parents’ problem drinking; the association between parents’ coping motive and children’s drinking motives; the link between parents’ conformity motive and children’s coping motive; the relationship between parents’ problem drinking and children’s conformity motives; the association between children’s coping motive and alcohol use; the link between children’s conformity motives and their substance misuse; and the association between children’s gender and age with substance misuse and between gender and alcohol use. All other path coefficients were significant. As shown in Figure 1, parents’ drinking motives were found to be positively and directly associated with parents’ problem drinking, whereas only parents’ conformity motives were directly associated with children’s conformity motives. Moreover, parents’ problem drinking was positively and strongly associated with children’s substance misuse and alcohol use. Furthermore, children’s coping motives was positively associated with substance misuse, whereas children’s conformity motives were linked only to alcohol use. Along with the direct paths, as shown in Table 3, two indirect relationships were found significant at 5% level; that is their 95% confidence intervals did not include zero. Specifically, indirect links between parents’ coping motives and children’s substance misuse via parents’ problem drinking; and parents’ coping motives and children’s alcohol use via parents’ problem drinking.

The squared multiple correlations for the endogenous variables indicate that the model accounted for 62% of the variance of parents’ problem drinking, and for 49% of the variance of children’s substance misuse. Less variance is explained for children’s alcohol use (26%) and drinking motives (i.e. 32% for coping motives and 17% for conformity motives). Finally, the total amount of variance explained by the model (TCD = .69) indicated a good fit to the observed data. In terms of effect size, TCD = .71 corresponds to a correlation of r = .84. According to Cohen’s (1988) traditional criteria for evaluating effect sizes, this is a very large effect size.

**4. Discussion**

The goal of the present study was to concurrently examine the contribution of parental drinking problems and drinking motives and their children’s drinking motives, alcohol use and substance misuse use in a UK sample. Moreover, we investigated how the drinking motives of children related to drinking motives of their parents.

Consistent with previous studies, results revealed that young people’s alcohol use and substance misuse are influenced by both individual and family variables (Irons, Iacono, Oetting, & McGue, 2012). Specifically, in line with the Motivational Model of Alcohol Use, young people’s motives for alcohol use are directly linked to their alcohol use and substance misuse (Kuntsche, Knibbe, Gmel, & Engels, 2005; Windle, 2000; Cox & Klinger, 1988, 1990). Moreover, parental problem drinking is directly associated with children’s alcohol use and substance misuse (Mares et al., 2015), supporting the effect of modelling of alcohol use within the family (Bandura, 1986); that is, children observing their parents drinking are more likely to misuse alcohol and substances.

Furthermore, results show that parental problem drinking also mediates the relationship between parental coping motives to drink and their children’s alcohol and substance use. That is, youths’ alcohol and substance use may be influenced by parents who drink to cope with adverse situations and stress conditions. According to the model of intergenerational transference (Larsen, Engels, Wiers, Granic, & Spijkerman, 2012), it could be argued that children observing their parents’ behaviour learn that alcohol and substances may provide a possible way to cope with negative or stressful situations.

Additionally, with regard to parental conformity motives, results suggest that these drinking motives may influence children’s conformity motives, which, in turn, predict alcohol use. This finding is consistent with the model of intergenerational transference. Moreover, it is in line with the prototype willingness model of risky behaviours (Gibbons & Gerrard, 1995). From this perspective, adolescents compare their own self-image with their “prototype” drinker, for example family members (as in the present study) or peers, and shape their motives to drink in accordance with significant others. It could be argued that parents with strong conformity motives to drink constitute a “typical” model for their children, who may be more likely to drink to conform. These results add to findings in the field, suggesting that young people’s beliefs and motives about drinking may be shaped not only by parents’ actual drinking behaviour, as found in previous studies but also by parents’ own motives to drink.

The current study has some limitations that need acknowledgement. The cross-sectional design precludes causal inferences, and future research should use a longitudinal design. It would be interesting, from a preventative perspective, to determine whether changes in parental drinking behaviours during the period of late childhood can affect the drinking and substance use patterns of their children. That is, do the drinking motives and behaviours of children become ‘locked down’ at some key developmental stage, or might problem behaviours remain malleable in response to changes in parental behaviour for some period of time? A further limitation of this study is that access to child respondents was necessarily restricted by parents themselves. It is not possible, therefore, to determine whether there are differences in drinking motives, patterns and problems between those children whose parents consented to their participation, and those whose parents refused such consent.

However, from an intervention point of view, the major strength of this study consists in highlighting the possible link between parent and child drinking and substance use behaviours and drinking motives. Indeed, previous evidence (Van Damme, et al., 2015) suggests that cognitive transferable styles are more accessible for changing than genetic or environmental factors. Moreover, this finding supports the utility of attempts to get both parents and their children involved in preventive alcohol and substance use-related interventions for young people (Jackson & Dickinson, 2009).

In conclusion, this study shows that parental problem drinking and drinking motives relate to their children’s alcohol use, substance misuse and drinking motives. These intergenerational factors should be addressed in substance misuse interventions, and explored in more detail in future research.

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**Figure 1: Model of the inter-relationships between the study variables**

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Notes: N=148; \**p<*0.05; \*\**p<*0.01; \*\*\**p<*0.001.

**Table 1: Sample characteristics (N=148 parents and 148 children)**

|  |  |  |
| --- | --- | --- |
|  | **Parents** | **Children** |
| **Age (yrs)** |  |  |
| *Mean* | 43.71 | 15.25 |
| *Standard Deviation* | 7.28 | 1.75 |
| *Range* | 26 – 65 | 10 – 17 |
|  |  |  |
| **Gender (%)** |  |  |
| *Female* | 44.6 | 47.3 |
| *Male*  | 55.4 | 52.7 |
|  |  |  |
| **Social Status (%)** |  |  |
| *A – Upper middle class* | 6.8 | - |
| *B – Middle class* | 22.3 | - |
| *C1 – Lower middle class* | 27.0 | - |
| *C2 – Skilled working class* | 21.6 | - |
| *D – Working class* | 14.2 | - |
| *E – Non-working* | 8.1 | - |

**Table 2: Correlation matrix for the study variables**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Mean** | **SD** | **1** | **2** | **3** | **4** | **5** | **6** |
| 1. Parents’ coping motives | 6.34 | 3.52 | 1 |  |  |  |  |  |
| 2. Parents’ conformity motives | 5.41 | 3.20 | .74\*\* | 1 |  |  |  |  |
| 3. Parents’ AUDIT score | 8.03 | 7.84 | .76\*\* | .68\*\* | 1 |  |  |  |
| 4. Children’s coping motives | 4.92 | 2.95 | .51\*\* | .50\*\* | .52\*\* | 1 |  |  |
| 5. Children’s conformity motives | 5.67 | 3.34 | .34\*\* | .39\*\* | .30\*\* | .73\*\* | 1 |  |
| 6. Children’s CRAFFT score | 10.7 | 1.65 | .48\*\* | .46\*\* | .65\*\* | .57\*\* | .42\*\* |  |
| 7. Children’s alcohol use  | 3.43 | 1.75 | .20\* | .25\*\* | .37\*\* | .43\*\* | .40\*\* | .53\*\* |

*Notes:* N=148; \**p<.05;\*\*p<.01*.

**Table 3: Standardized bootstrapped estimates of the indirect effects of independent (parents’ coping motives) on the dependent (children’s substance misuse and alcohol use) variables through the proposed mediator (parents’ AUDIT scores) linked to the dependent variables.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Independent variable** | **Mediator** | **Dependent variable** | **Estimate** | **Confidence intervals** |
|  |  |  |  | **Lower bound** | **Upper bound** |
| **Parents’ coping motives** |  | **Children’s CRAFFT scores** |  |  |  |
|  | **Parents’ AUDIT scores** |  | **.116\*** | **.034** | **.198** |
| **Parents’ coping motives** |  | **Children’s alcohol use** |  |  |  |
|  | **Parents’ AUDIT scores** |  | **.089\*** | **.022** | **.156** |

*Notes:* \* Significant indirect relationships at 5% level; that is, their 95% confidence intervals did not include the zero value.