Parental divorce and adolescent excessive drinking
Tomcikova, Zuzana

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Leisure time activities, parental monitoring and drunkenness in adolescents

Zuzana Tomcikova, Andrea Madarasova Geckova, Jitse P. van Dijk, Sijmen A. Reijneveld

Pending Revision

Abstract

Alcohol use, and in particular drunkenness is a relatively common behaviour among adolescents, and has become a major public health concern. The aim of this cross-sectional study was to explore the association between adolescent drunkenness and participation in risky leisure time activities and parental monitoring. A questionnaire survey was conducted and 3694 Slovak elementary school students (mean age 14.5 years; 49.0% males; response 93.0%) were assessed for drunkenness in previous month, participation in risky leisure activities and parental monitoring. Participation in risky leisure time activities increased the probability of drunkenness among adolescents, while parental monitoring decreased this probability. The effect of participation in risky leisure time activities did not change after adding the mother’s and father’s monitoring into the models. In contrast, adolescents who participated in at least one risky leisure time activity and reported to have been drunk in the previous month were significantly less monitored by their mothers, but not their fathers in comparison with those who participated in the mentioned activities but who did not report having been drunk. Our results imply that adolescents involved in going out with friends (bars, pubs, etc), having parties with friends and/or visiting sporting events every day or several times a week are at a higher risk of drunkenness, as are those less monitored by their parents. These less monitored adolescents and their parents should thus become a particular target group in prevention.
Introduction

According to the most recent Health Behaviour in School-aged Children (HBSC) study (Currie et al., 2008), Slovak children start drinking alcohol at a relatively early age: 9% of girls and 14% of boys at age 11 reported drinking alcohol at least once a week, and this proportion increases with age. The age of the first experience with drunkenness is also relatively low – at 15 years old, 31% of girls and 39% of boys have already experienced being drunk. This can be expected to have rather severe consequences for public health.

The family environment, being the most important developmental context, has a large influence on the harmful effects of drinking alcohol, including drunkenness, an influence even larger than a wide range of other social factors. That is, the family environment and positive parenting practices can lead to both a direct and indirect reduction of adolescent alcohol use (Nash et al., 2005). Even if an adolescent is exposed to risk factors outside the family (peer influences, going out with friends, etc), positive relationships within the family and adequate parental control can act as protective factors (Nash et al., 2005). Family interactions, processes and parenting have been found to be associated with diverse aspects of adolescent behaviour (Bray et al., 2001; Nash et al., 2005). Presumably, adolescents who are emotionally detached from their parents are at risk for a variety of deviant behaviours, including alcohol use (Crawford & Novak, 2008), and the provision of warmth and support by parents is associated with less adolescent alcohol use (Cleveland et al., 2005).

Parental monitoring is one of the processes through which the family facilitates the adjustment of adolescents, by providing them with necessary supervision and guidance (Smetana & Daddis, 2002). It is conceptualized as the parents’ knowledge of their child’s whereabouts, activities and friends (Jacobson & Crockett, 2000). Adolescence is a specific period in terms of parental monitoring for two reasons. First, the monitoring is less about direct observation and more about communication between parents and the adolescent (about their whereabouts, peers, schedule to return home, etc.) when compared to earlier years (Clark et al., 2008). Second, adolescents’ need for autonomy and independence increases, and they spend more time outside their parental home when compared to the previous years (Loukas & Prelow, 2004). Therefore, leisure time activities outside the home are the most critical domains for parental monitoring.

In adolescence, social activities are the most pursued leisure time activities and are also the most important from a developmental perspective (Caldwell & darling, 1999; Kerr et al., 1999). Besides the undeniable positive role of these activities, they also bring along certain risks, because they often involve the adolescent in behaviours that might
be developmentally maladaptive (e.g. alcohol drinking) (Caldwell & Darling, 1999). Several studies have shown that parental monitoring is associated with less adolescent involvement with alcohol (Fors et al., 1999; Griffin et al., 2000; Beck et al., 2004). Monitoring has been shown to have both a direct and indirect (through affecting associations with peers who drink) impact on adolescent behaviour regarding alcohol use (Freisthler et al., 2009).

The aim of our study was to explore the associations between adolescent drunkenness and participation in risky leisure time activities and parental monitoring.

**Methods**

**Sample**
The study sample consisted of 3694 elementary school students from the 8th and 9th grades from three cities in Slovakia—Bratislava (600,000 inhabitants, Western Slovakia), Zilina (156,000 inhabitants, Northern Slovakia) and Kosice (240,000 inhabitants, Eastern Slovakia)—as well as several smaller towns in the Kosice region (10,000 to 40,000 inhabitants). The age range was from 13 to 16, with a mean age of 14.5 (± 0.5). The sample was stratified by gender (49.0% males, 51.0% females) and the representation of the regions was as follows: 24.6% of the participants lived in Bratislava, 21.3% in Zilina, 32.1% in Kosice and 22.0% in several smaller towns in the Kosice region. Data were collected in autumn 2006 by a team of trained researchers and their assistants. Schools and classes were selected randomly in every mentioned region or city. We asked school directors for participation, and after their approval and approval from parents, we performed the data collection. Respondents filled in the questionnaire during two regular school lessons (45 minutes each) on a voluntary and anonymous basis, without the presence of the teacher. Response rate was 93.0%, with non-response due mainly to illness.

**Measures**

*Excessive drinking – drunkenness in the last four weeks:* Drunkenness in the last four weeks was assessed based on the self-evaluation of respondents. They were asked whether they had been drunk during the last four weeks, with the responses: no / 1 to 2 times / 3 or more times. Before analysis we dichotomized this question into: no / yes (at least 1 time).

*Leisure activities outside the home:* Respondents were asked how often they devote themselves to eleven different leisure time activities, with possible answers as: every day; several times a week; several times a month; never. For the purpose of this study, we chose three activities with the greatest expected risk concerning excessive drinking: going out with
friends (to bars, pubs, etc); having parties with friends; and visiting sport matches. The answers were then dichotomized as following: (1) every day + several times a week; (2) several times a month + never.

Parental monitoring: Parental monitoring was measured using the Adolescent Family Process Measure (Vazsonyi, 2003), which is a 25-item self-reported questionnaire assessing six dimensions of family processes (closeness, support, monitoring, communication, conflict and approval), for both the mother and father, respectively. For the purposes of this study we used only the parental monitoring dimension saturated by four items (mother’s and father’s respectively). A five-point Likert-type format was used ranging from strongly disagree (1) to strongly agree (5). Scores ranges from 4 to 20, with higher scores indicating a higher level of monitoring from each parent. Cronbach’s alpha was .73 for mother’s monitoring and .78 for father’s monitoring.

Statistical analysis
We first assessed the characteristics of the sample. Next, we performed a binary logistic regression to analyze the association between adolescent drunkenness in the previous month and participation in at least one of the three risky activities (daily or several times a week) and parental monitoring, leading to odds ratios (OR) with associated 95%-confidence intervals (CI). Two models were constructed and adjusted for gender. In the first model we analyzed the effect of participation on risky activities as an independent variable. In the second model we added father’s monitoring and mother’s monitoring. We checked possible interactions by gender, but these were not statistically significant, so we decided to calculate the models adjusted for gender. In the next step, we excluded from the sample those respondents who did not participate in any of the three risky activities. Within this sample of “risk participants” (those who reported participation in at least one of the three risky activities daily or several times a week), respondents who reported having been drunk in the previous month were compared with those who did not in the levels of parental monitoring. For this purpose, t-tests were performed. All data were analysed using SPSS, version 16.
Results

A description of the sample and its characteristics can be found in Table 5.1.

Table 5.1 Frequencies of the study variables

<table>
<thead>
<tr>
<th></th>
<th>Males N = 1765</th>
<th>Females N = 1834</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Drunkenness in last 4 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>324</td>
<td>19.3</td>
</tr>
<tr>
<td>no</td>
<td>1353</td>
<td>80.7</td>
</tr>
<tr>
<td>Leisure activity outside home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>every day + several times a week</td>
<td>890</td>
<td>53.4</td>
</tr>
<tr>
<td>several times a month + never</td>
<td>776</td>
<td>46.6</td>
</tr>
<tr>
<td>Father’s monitoring</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>11.7</td>
<td>4.0</td>
</tr>
<tr>
<td>Mother’s monitoring</td>
<td>12.9</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Table 5.2 shows the results of logistic regression analysis for the effect of participation in risky activity and parental monitoring on drunkenness in the previous month among adolescents. Participation in risky activities increased the probability of drunkenness among adolescents (model 1). In the second model we added father’s monitoring and mother’s monitoring. The effect of participation in risky activities remained significant and mother’s monitoring was found to have a significant effect – a low level of mother’s monitoring increased the probability of drunkenness among adolescents. The effect of gender was not significant in any of the models.
Table 5.2 Binary logistic regression estimates for the effect of participation in risky activities and parental monitoring on drunkenness in the last four weeks.

<table>
<thead>
<tr>
<th>Drunkenness in the last four weeks</th>
<th>OR (95% CI)</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1 (Ref)</td>
<td>1 (Ref)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.95</td>
<td>0.87</td>
<td>(0.79 – 1.13)</td>
</tr>
<tr>
<td>Participation in risky activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>1 (Ref)</td>
<td>1 (Ref)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3.21</td>
<td>3.02</td>
<td>(2.65 - 3.88)***</td>
</tr>
<tr>
<td>Monitoring father</td>
<td></td>
<td>0.99</td>
<td>(0.96 – 1.03)</td>
</tr>
<tr>
<td>Monitoring mother</td>
<td></td>
<td>0.93</td>
<td>(0.89 – 0.96)***</td>
</tr>
</tbody>
</table>

*** p < 0.001; Ref=reference category

Table 5.3 shows the differences in the levels of parental monitoring between “risky participants” (adolescents who reported participation in at least one of the three risky activities daily or several times a week) who reported having been drunk in the previous month and those who did not. Significant differences were found in levels of mother’s monitoring both among male and female adolescents. Those who reported having been drunk in the previous month scored significantly lower in monitoring from the mother.

Table 5.3 Differences in parental monitoring among “risk participants” between those who did and did not report having been drunk; a higher score on monitoring signifies more monitoring

<table>
<thead>
<tr>
<th></th>
<th>drunk mean</th>
<th>drunk SD</th>
<th>non-drunk mean</th>
<th>non-drunk SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring father</td>
<td>11.4</td>
<td>4.1</td>
<td>12.0</td>
<td>3.9</td>
<td>ns*</td>
</tr>
<tr>
<td>Monitoring mother</td>
<td>12.0</td>
<td>3.9</td>
<td>13.1</td>
<td>3.8</td>
<td>p&lt;0.001*</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring father</td>
<td>11.8</td>
<td>4.1</td>
<td>12.3</td>
<td>4.0</td>
<td>ns*</td>
</tr>
<tr>
<td>Monitoring mother</td>
<td>13.5</td>
<td>3.7</td>
<td>14.3</td>
<td>3.6</td>
<td>p&lt;0.01*</td>
</tr>
</tbody>
</table>

* t-tests
Table 5.4 shows the differences in levels of parental monitoring between “non-participants” (adolescents who reported not participating in any of the risky activities) who reported having been drunk in the previous month and those who did not. Significant differences were found in levels of mother’s and father’s monitoring among female adolescents. Those who reported having been drunk in the previous month scored significantly lower in monitoring both from the mother and the father.

Table 5.4 Differences in parental monitoring among “non-participants” between those who did and did not report having been drunk; a higher score on monitoring signifies more monitoring

<table>
<thead>
<tr>
<th></th>
<th>drunk</th>
<th>non-drunk</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>SD</td>
<td>mean</td>
</tr>
<tr>
<td>Male Monitoring father</td>
<td>11.2</td>
<td>4.1</td>
<td>11.6</td>
</tr>
<tr>
<td>Male Monitoring mother</td>
<td>12.6</td>
<td>4.0</td>
<td>13.2</td>
</tr>
<tr>
<td>Female Monitoring father</td>
<td>10.7</td>
<td>4.2</td>
<td>12.2</td>
</tr>
<tr>
<td>Female Monitoring mother</td>
<td>13.4</td>
<td>3.5</td>
<td>14.5</td>
</tr>
</tbody>
</table>

* t-tests

Discussion

The current study explored the association between adolescent drunkenness, participation in leisure time activities and parental monitoring. We found that participation in risky leisure time activities increased the probability of adolescent drunkenness in the previous month. That is, adolescents who reported participating in at least one of three risky leisure activities (going out with friends, having parties, going to sport matches) were more likely to report having recently drunk.

This effect remained even after adding a father’s and mother’s monitoring into the models. All three leisure time activities explored are quite common for adolescents of this age – almost half of our sample reported having participated in at least one of the three risky activities daily or several times a week. Furthermore, these activities involve contacts and relationships with peers, which are an essential part of development in this age (Kerr et al., 1999). Unfortunately, these relationships take place mostly in places where alcohol is sold, so maintaining a social network in adolescence is strongly connected with places or situations in which alcohol is easily obtained.

Secondly, mother’s monitoring was found to have an affect on adolescent drunkenness in the previous month—adolescents who are less monitored by their mothers are more likely to report having recently been drunk. This is partly in line with other researchers who found that the less an adolescent has been monitored by his/her parents the more likely he/
she is to be involved in alcohol (Fors et al., 1999; Griffin et al., 2000; Beck et al., 2004). Because through adequate monitoring parents became aware of situations or peer friends that may lead to exposure to alcohol and such knowledge enables them to divert their children from potentially risky situations and friends (Bahr et al., 1998).

The fact that mother’s monitoring is a stronger protective factor than father’s monitoring might have several explanations. One might be that a mother is usually the person to whom adolescents turn to with their daily problems, while a father is rather the person to talk about more serious decisions and the future (Geckova et al., 2000). This, together with the fact that fathers tend to be home with the family less often than mothers might imply that it is more up to the mother to acquire daily information about the whereabouts of an adolescent to enable her to monitor properly. Some studies have identified these gender differences in a variety of parenting behaviours and attitudes (Cottrell et al., 2007). Mothers usually know more about their adolescent children’s lives; they spend more time with them in joint activities and they converse more about personal topics (Crourter et al., 1990; Bumpus et al., 2001; Waizenhofer et al., 2004). Furthermore, mothers receive information about their children in a more direct way, whereas fathers receive it mostly indirectly from their wives (Waizenhofer et al., 2004).

Another finding of this study is the different pattern of the monitoring – drunkenness association among those who participate in risky activities and those who don’t. Among risk participants, those who reported having been drunk scored significantly lower in mother’s monitoring than those who hadn’t been drunk. Among non-participants, a protective effect of mother’s and father’s monitoring was found, but only for girls. This finding basically fits with what has been previously stated. To have social contacts via the studied leisure time activities is healthy for adolescents. And despite the fact that these activities are often connected with places where alcohol is sold, as we can see from this finding, they are not risky themselves, and parents are able to help prevent unwanted side-effects. Unsupervised time spent with peers is becoming problematic either when peers themselves are involved in alcohol or when the parent-adolescent relationship, including monitoring, is poor (Aizer, 2004; Han & Waldfogel, 2007). This means that although family is becoming a less significant factor in the present age compared to previous years, parents still can protect their adolescent children inter alia by monitoring their whereabouts, activities and friends. This protective effect of parents’ knowledge of adolescents’ activities has been found in a number of studies (Chassin et al., 1993; Fors et al., 1999; Griffin et al., 2000; Beck et al., 2004; Martins et al., 2008).
Strengths and limitations
The present study has several strengths and limitations. A first strength is the size of study sample and its representativeness for the regions of Slovakia. Selection bias was unlikely due to the way the sample was drawn and the response rate (93%) was satisfactory. A main limitation of our study is that it relied on the self-report of respondents. However, the questionnaires were filled out anonymously, which has been shown to lead to rather valid self-reports (Del Boca & Noll, 2000). Moreover, adolescents from small towns and rural areas were somewhat underrepresented in our sample. However, prevalence rates of drunkenness were similar among the adolescents concerned and the remainder of our sample, which makes it rather unlikely that this factor would affect our findings.

Conclusion
Our findings show the importance of parental monitoring to prevent unwanted side-effects of social leisure time activities among adolescents. In contemporary society, when the rates of excessive drinking in the European Union are increasing, this issue requires research attention. Our results imply that adolescents involved in going out with friends (bars, pubs, etc), having parties with friends and/or visiting sporting events every day or several times a week are at a higher risk of drunkenness, as are those less monitored by their parents. These less monitored adolescents and their parents should thus become a particular target group in prevention. One prevention strategy might be to support safe, alcohol-free environments for these peer interactions on one hand and to limit the availability of alcoholic drinks in environments that are frequented by young adolescents (e.g. to increase the age limit for selling alcohol to adolescents in public places) on the other. Since the design of this study was cross-sectional, the implication for further research might be to examine longitudinal data to confirm the causal mechanisms with regard to hazardous drinking.
References


