The impact of alcohol-specific rules, parental norms about early drinking and parental alcohol use on adolescents’ drinking behavior

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Background: The present study explores the role of having rules about alcohol, parental norms about early alcohol use, and parental alcohol use in the development of adolescents’ drinking behavior. It is assumed that parental norms and alcohol use affect the rules parents have about alcohol, which in turn prevents alcohol use by adolescent children. Methods: Longitudinal data collected from 416 families consisting of both parents and two adolescents (aged 13 to 16 years) were used for the analyses. Results: Results of structural equation modeling show that having clear rules decreases the likelihood of drinking in adolescence. However, longitudinally alcohol-specific rules have only an indirect effect on adolescents’ alcohol use, namely through earlier drinking. Analyses focusing on explaining the onset of drinking revealed that having strict rules was related to the postponement of drinking initiation of older and younger adolescents. Further, parental norms about adolescents’ early drinking and parental alcohol use were associated with having alcohol-specific rules. Parental norms were also related to adolescents’ alcohol use. Conclusions: The current study is one of the first using a full family design to provide insight into the role of alcohol-specific rules on adolescents’ drinking. It was shown that having strict rules is related to postponement of drinking, and that having alcohol-specific rules depends on other factors, thus underlining the complexity of the influence of parenting on the development of adolescents’ alcohol use. Keywords: Alcohol, alcohol-specific rules, parental drinking, parental norms about early drinking.

Studies focusing on the role of parents as a factor in the development of adolescents’ alcohol use have mainly focused on parental drinking and general parenting practices, such as support and control (e.g., Barnes & Farrell, 1992; Reifman, Barnes, Dintcheff, Farrell, & Utg, 1998). Interest has recently shifted to the role of alcohol-specific socialization, which refers to steps taken by parents to manage or prevent adolescents’ drinking (e.g., imposing rules about alcohol use, expressing disapproval of youngsters’ drinking, or talking about alcohol at home).

One of the most important alcohol-specific socialization practices seems to be having strict rules about adolescents’ alcohol use (Wood, Read, Mitchell, & Brand, 2004; Yu, 2003). In a cross-sectional study, Van der Vorst, Engels, Deković, Meeus, and Van Leeuwe (2005) revealed a strong negative association between providing strict rules about alcohol use and adolescents’ drinking. This association was found on the basis of separate reports of different family members (father, mother and siblings), and for older and younger siblings in a family, demonstrating the robustness of the finding. Further, Jackson, Henriksen, and Dickinson (1999) reported that parents who permitted their children to drink alcohol at home were more likely to have alcohol-using children two years later. Wood et al. (2004) demonstrated that parental permissiveness towards adolescents’ heavy drinking leads to a higher frequency of heavy consumption.

Nevertheless, because most of these studies have a cross-sectional design it remains unclear whether providing rules actually does prevent adolescents’ alcohol use. Only when the data include changes in adolescents’ drinking over time is it possible to establish whether parental rule setting does in fact prevent early onset of alcohol use, or prevent heavy drinking. The importance of revealing this relationship is also illustrated by studies demonstrating the possible negative effects of drinking in early adolescence on problem drinking or alcohol dependence later in life (e.g., Fergusson, Lynsky, & Horwood, 1994; Pedersen & Skrondal, 1998).

Not all parents consider having strict rules about adolescents’ alcohol use equally important. This might depend partly on the parents’ own norms or attitudes about alcohol, and on their own drinking behavior. Theoretically, Turner (1991) argued that a distinction should be made between injunctive and descriptive norms. Injunctive norms refer to norms related to behavior which people approve or disapprove, and descriptive norms refer to modeling, which means that one person imitates the behavior of another (Graham, Marks, & Hansen, 1991). Parents generally have injunctive attitudes or norms about what they think is appropriate with respect to...
alcohol use by youngsters. These norms can, for instance, be based on cultural or social norms, or on their own drinking history. Parents probably imposed these norms about drinking before they began imposing rules on their own children. To our knowledge no study has examined this relation. However, some studies did focus on the direct impact of parental norms about alcohol on adolescents’ alcohol use (e.g., Spijkerman, Van Den Eijnden, Overbeck, & Engels, in press), but the findings were conflicting. Yu (2003) found no relation between parental attitudes concerning drinking and adolescents’ current use or the onset of drinking. This is in contrast with the findings of Wood et al. (2004) and of Webster, Hunter, and Keats (1994) who reported a direct positive association between parental norms and frequency of adolescents’ drinking, and an indirect association between norms and quantity of drinking, namely through adolescents’ own norms about alcohol. Other studies also observed primarily indirect effects of parental norms about adolescents’ drinking on adolescents’ alcohol involvement, for example through perceived prototypes (Spijkerman, et al., in press) or through adolescents’ own alcohol preferences (Biddle, Bank, & Marlin, 1980). These studies thus indicate that the norms parents have about adolescents’ alcohol use mainly indirectly play a role in the development of drinking of youngsters.

The current study therefore investigates whether parental norms indirectly influence adolescents’ drinking, namely through having alcohol-specific rules.

Another aspect that might affect imposing rules about alcohol is the drinking behavior of the parents themselves. In Western societies, most parents consume alcohol and have established a regular drinking pattern. Although there is evidence that adolescents imitate parental drinking (e.g., Beal, Ausiello, & Perrinn, 2001) – which Turner (1991) defines as descriptive norms – parental alcohol use could also have an indirect impact on adolescents’ drinking, for instance through alcohol-specific rules. Because of the generally prolonged nature of adults’ drinking, we assume that parents had already established a drinking pattern and already had norms about youngsters’ alcohol use before they start imposing these rules on their own children. Therefore high levels of alcohol use by the parents may have negative effects on having strict rules about alcohol; i.e., if parents are regular drinkers, they may consider themselves to be less credible when providing rules, which might influence rule setting, which might in turn affect adolescents’ alcohol use.

The main objective of the current study was to examine the role of alcohol-specific rules in the development of adolescents’ drinking, and the indirect effect of parental drinking and parental norms on adolescents’ involvement with alcohol. Therefore we tested whether maternal and paternal alcohol use, and maternal and paternal norms about adolescents’ early drinking, were related to alcohol-specific rules, and whether alcohol-specific rules were, in turn, related to adolescents’ alcohol consumption over time. In these analyses we controlled for the previous drinking of youngsters. In addition, because it is relevant to know whether these rules postpone the uptake of alcohol use we assessed whether alcohol-specific rules predict the actual onset of drinking. The longitudinal data used in the present study were collected from the father, mother and two adolescents in the same family, enabling us to compare the perceptions of each family member on alcohol-specific rules, and to explore possible differences between older and younger adolescents in a family.

Method

Participants and procedure

Data for this study were collected as part of a broader longitudinal survey (Family and Health), which examined different socialization processes underlying various health behaviors in adolescence (for details of the sample selection, see Van der Vorst et al., 2005). We asked 20 municipalities in the Netherlands for the addresses of families with at least two children aged 13 to 16 years. We approached approximately 5000 Dutch families by mail to participate in our study, of whom 885 agreed to participate by returning the enclosed response form. These families were then contacted by telephone to establish whether they fulfilled all the inclusion criteria: i.e., the parents had to be married or living together, and the youngsters and their parents should be biologically related. Families with twins or with offspring who had mental or physical disabilities were excluded from the study. In addition, we also made a selection to achieve an equal division of education level (one-third special or low education, one-third intermediate general education, one-third preparatory college and university) and to achieve an equal division of sibling dyads (boy–boy, boy–girl, girl–boy, girl–girl). Finally, 428 families were selected on the basis of the aforementioned criteria and divisions at time 1 (T1), and of these, 416 families participated one year later at time 2 (T2). Only the data of the first and second waves are currently available.

All four family members filled out an extensive questionnaire individually at home in the presence of a trained interviewer; the questionnaire took about two hours to complete. The respondents were not allowed to discuss the questions or answers with each other. Each family received 30 euros after the four family members had completed the questionnaire. At the end of the project five checks for 1000 euros will be raffled between the families who participated in all waves of the study.

Each family consisted of both parents and two adolescent children; 95% of the participants were of Dutch origin. The mean age of the older siblings was 15.22 years at T1 (SD = .60; range 14 to 17 years), and
that of the younger siblings was 13.36 years (SD = .50; range 13 to 15 years). Fathers’ mean age was 46 years (SD = 4.00) and mothers’ 44 years (SD = 3.57). Of the older adolescents, 52.8% were male and of the younger adolescents, 47.7% were male. About one-third of both siblings followed special or low education, one-third followed an intermediate general education, and the remainder followed the highest level of secondary school in the Netherlands (i.e., preparatory college and university education).

Measures

Alcohol consumption. Each of the four family members was asked about the frequency of their alcohol use in the previous four weeks. The participants had to respond on a 6-point scale ranging from (1) ‘have not been drinking’ to (6) ‘every day’ (Engels & Knibbe, 2000). The intensity of drinking was assessed by asking the number of glasses of alcohol the respondents had drunk in the previous week during weekdays and during the weekends in contexts at home and outside the home (Engels, Knibbe, & Drop, 1999).

Rules about alcohol. We developed a 10-item scale to measure the degree to which parents permit their children to consume alcohol in various situations, such as ‘in the absence of parents at home’ or ‘at a friend’s party’ (Van der Vorst et al., 2005). Thus, we asked each family member what rules the parents had or what they prohibited concerning alcohol. Respondents had to answer in what degree these rules were applicable at their home. Response categories ranged from (1) ‘completely applicable’ to (5) ‘not applicable at all’. Higher scores indicate having stricter rules about alcohol consumption. The internal consistency was high: .90 (fathers about older adolescents), .88 (fathers about younger adolescents), .89 (mothers about older adolescents), .86 (mothers about younger adolescents), .91 (older adolescents about parents), .92 (younger adolescents about parents).

Norms about alcohol. We used 7 items of a Dutch translation of the ‘Alcohol Use Norms Scale’ of Brody, Flor, Hollet-Wright, McCoy, and Donovan (1999) to measure norms about drinking at an early age. The instrument assesses the degree of perceived acceptability of various drinking behaviors for 12-year-old adolescents. However, because the current study did not include 12-year-olds, we asked the parents about the acceptability of drinking for 13-year-old boys and girls separately. Each item of the scale began with the phrase ‘How acceptable is it for a thirteen-year-old boy/girl to...’ followed by situations such as ‘have a small glass of wine during a family dinner’ or ‘get drunk when drinking alone’. Response categories ranged from (1) ‘totally unacceptable’ to (5) ‘totally acceptable’. A higher score indicates more liberal norms toward the drinking of 13-year-olds. Because of the high correlation between norms about alcohol use of boys, and norms about alcohol use of girls for both parents (.94 for mothers and .95 for fathers), we summed them into one variable for the mother and one for the father. The internal consistency of these two scales was high: .83 (mothers) and .85 (fathers).

Strategy of analyses

First, descriptive analyses were conducted to calculate the means and standard deviations of intensity and frequency of drinking reported by each family member. Second, paired t-tests were used to compare the responses of the family members on the scale of rules about alcohol to gain insight into possible differences in parental rules for their children, and also into possible differences in the experiences of parents and adolescents. We also compared norms about early adolescents’ drinking of each parent. Third, to test our longitudinal model, we used structural equation modelling with the help of AMOS 5.0. In the model, assessments of alcohol use are based on self-reports of each particular family member and assessments of norms about adolescents’ alcohol use are based on the information obtained from the mothers and fathers. As presented in Figure 1, each latent factor of drinking in the model was measured by two manifest variables, namely frequency and intensity of drinking. The latent factors of alcohol-specific rules for both adolescents were estimated by three indicators: The perception of the adolescent on parental alcohol-specific rules, the perception of the mothers on parental alcohol-specific rules, and the perception of the fathers on parental alcohol-specific rules. The fit of the models was measured by the following global fit indexes: \( \chi^2 \), CFI (Comparative Fit Index) and RMSEA (Root Mean Square Error of Approximation).

We estimated a covariance matrix with the help of AMOS Basics 5.0 using Full Information Maximum Likelihood for the saturated model on the raw SPSS-file (including ‘missing’ <3%). This covariance matrix was used as input matrix for the subsequent analyses. In the first step of the analysis we tested the model. We tested all possible paths between all variables. Next, we omitted all non-significant paths and conducted the analyses again. The results of this model (beta’s and fit), thus including solely significant paths, are illustrated (Figure 1) and reported (Table 1).

We allowed paternal norms about adolescents’ drinking to correlate with maternal norms about adolescents’ drinking and with fathers’ drinking. Maternal norms about alcohol were allowed to correlate with mothers’ alcohol use. The correlations between mothers’ drinking and fathers’ drinking were also estimated. Thus, it was assumed that most of these exogenous variables are interrelated. Further, we assumed that drinking of the older and the younger adolescents

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1 We also tested our research question on single-informant models. We tested three models. The first model is based on the perceptions of the adolescents on parental rules about alcohol use. In this model, assessments of alcohol use are based on self-reports of each particular family member and assessments of norms about adolescents’ alcohol use are based on the information obtained from the mothers and fathers. For both parents separately we developed two models which are, conceptually, the same as the model used for the adolescents, but one is based on the information from the mothers on rules about alcohol, and the other on the information from the fathers on rules about alcohol. The findings of these three models were comparable to the findings of the single construct model presented in this paper.
at both time points were not independent. Therefore, the error terms of these latent variables assessing alcohol consumption were correlated. The same assumption holds for rules about alcohol for older and younger adolescents. Consequently, the correlation of the error terms of these two variables was estimated. Because alcohol-specific rules are more or less applicable for older and younger adolescents, we expected that response tendencies (systematic error) are the same for older and younger adolescents. For this reason the error terms (including systematic and random error) of the manifest variables of the alcohol-specific rules of the older adolescents were allowed to correlate with the corresponding error terms of the manifest variables of the alcohol-specific rules of the younger adolescents, see also Byrne (1998, pp. 359–360).

In the second phase of the analysis we tested whether the significant paths concerning the older adolescents in the model have a different magnitude than the paths concerning the younger adolescents, and thus, whether there were differences between older and younger adolescents. Constraining the same paths of the older and the younger siblings to be equal, calculating the $\chi^2$ of this constrained model and comparing it to the $\chi^2$ of unconstrained model provides an answer as to whether these paths are different. If $\chi^2$ increases significantly, one or more paths are significantly different for the older and the younger adolescents.

In this model, we cannot directly test whether parental rules predict the onset of drinking, because both drinkers and non-drinkers at T1 are included in the analyses. In a third step of the analysis we selected all the younger adolescents who were non-drinkers at T1, i.e., who reported that they had not drunk any alcoholic beverage in the previous four weeks. This sample ($N = 241$), which included non-drinking younger adolescents and their older siblings, was used to test the initial model again. The new model was exactly the same as the initial model, except that the latent variable of alcohol use of the younger adolescents at T1 was omitted due to lack of variance (all younger adolescents were non-drinkers at T1). Thus, this new model included: Norms mother, Norms father, Alcohol mother, Alcohol father, Alcohol-specific rules oldest T1, Alcohol-specific rules youngest T1, Alcohol oldest T1, Alcohol oldest T2 and Alcohol youngest T2. These analyses were also conducted for older adolescents who were non-drinkers at T1 ($N = 121$) and their younger siblings. In this model the latent variable of alcohol use of the older adolescents at T1 was omitted.

### Results

**Descriptives on alcohol consumption**

Fathers drank the most glasses of alcohol in the week prior to T1, i.e., 13.5 glasses (SD = 12.86), compared with 6.2 glasses a week consumed by mothers (SD = 7.24). The older adolescents drank...
about 4.4 alcoholic beverages a week at T1 (SD = 6.81). One year later, the alcohol consumption of the older youngsters had increased to a mean of 7.1 glasses (SD = 10.62). The younger adolescents drank the least of the four family members (t(417) = 9.30, p < .001, indicating differences in use between siblings); i.e., on average 1.2 glasses a week (SD = 3.41). The intensity of drinking of the younger siblings increased to 3.1 drinks a week at T2 (SD = 8.36). The increase in drinking of both adolescents was significant (t oldest (407) = –6.50, p < .001 and t youngest (423) = –5.94, p < .001). In addition, the siblings differed significantly in their alcohol use at both time points (t wave 1 (417) = 9.30, p < .001 and t wave 2 (412) = 8.24, p < .001). Fathers drank alcohol on average 3 to 4 days a week (M = 3.69; SD = 12.86) and mothers 1 to 2 days a week (M = 3.08; SD = 1.69). Further, the older adolescents consumed alcohol on average (M = 2.15; SD = .95) more frequently than the younger ones (M = 1.56; SD = .75; t(424) = 11.85, p = .000); this was also the case one year later (M oldest = 2.33; SD = .90; and M youngest = 1.82; SD = .92; t wave 2 (422) = 10.36, p < .001). The increase in frequency of drinking of both adolescents was significant (t oldest (422) = –3.79, p < .001 and t youngest (424) = –6.70, p < .001).

**Paired t-tests on rules about alcohol and parental norms on alcohol**

Comparison of the responses of the four family members revealed strong differences in perceptions of rules about alcohol use (Table 1). Fathers and mothers thought that they were stricter about drinking than both their youngsters perceived them to be. Although all four family members reported that the parents treated the adolescents differently (they were more permissive towards older adolescents’ alcohol use than towards younger adolescents’ alcohol use), fathers and mothers were equal in their treatment of the older adolescents as well as of the younger adolescents. With regard to parental norms about adolescents’ alcohol consumption, fathers and mothers had similar, rather conservative norms (t = –1.66, p > .05).

**Structural equation models**

The fit of the model was satisfactory (Table 2). Further, the factor loadings of the latent alcohol variables in the model were high, ranging from .73 to .92, implying that the indicators assessed the latent variables of alcohol consumption accurately in the model. The factor loadings of the latent alcohol-specific rules variables in the model were also high, ranging from .66 to .78.

Paternal and maternal norms about adolescents’ early alcohol use were negatively associated with alcohol-specific rules towards older and younger adolescents (Figure 1 and Table 2). This suggests that more liberal norms about early alcohol use are related to fewer strict rules. Thus, parents who have more conservative norms have stricter rules. Paternal and maternal norms were also significantly, cross-sectionally associated with adolescents’ drinking of both youngsters. It seems that the more conservative the norms about early alcohol use, the less alcohol adolescents drank. A negative relation with alcohol-specific rules also applied for parental alcohol use, but only the associations between the alcohol consumption of fathers and having alcohol-specific rules reached significance. Paternal and maternal alcohol use was not directly related to adolescents’ alcohol use, with the exception of the path between maternal alcohol use and older adolescents’ drinking at T2. In addition, alcohol-specific rules were very strongly negatively related to adolescents’ drinking at T1 for both adolescents. Thus, it seemed that prohibiting adolescents’ drinking prevents youngsters from alcohol involvement. However, longitudinally we found no additional effect of providing rules about drinking on adolescents’ alcohol use T2, when drinking levels at T1 were controlled for. Nonetheless, having alcohol-specific rules was indirectly related to future use, namely, through previous drinking. The model shows that previous drinking was the strongest predictor of alcohol consumption one year later.

In the second step of the analysis, we measured whether the magnitude of the significant paths for the older adolescents in the model were as strong as these paths for the younger adolescents, with the

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Table 2 Standardized estimates of the paths presented in Figure 1

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<th>Covariances</th>
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<tr>
<td>Norms Mother – Norms Father</td>
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<tr>
<td>Norms Mother – Alcohol Mother</td>
<td>.09</td>
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<tr>
<td>Alcohol Father – Alcohol Mother</td>
<td>.57</td>
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<tr>
<td>Alcohol-specific rules Oldest</td>
<td>.53</td>
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<tr>
<td>Alcohol-specific rules Youngest</td>
<td>.35</td>
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<td>Alcohol Oldest T1 – Alcohol Youngest T1</td>
<td>.34</td>
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<tr>
<td>Standardized Regression weights</td>
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<td>Norms Mother – Alcohol-specific rules Oldest</td>
<td>–.36</td>
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<td>Norms Mother – Alcohol-specific rules Youngest</td>
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<td>Norms Mother – Alcohol Oldest T1</td>
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<td>Norms Father – Alcohol-specific rules Oldest</td>
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<td>Alcohol Youngest T1 – Alcohol Youngest T2</td>
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<tr>
<td>Alcohol Mother – Alcohol Oldest T2</td>
<td>.12</td>
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</tbody>
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\( \chi^2 (147) = 354.561, p = .000; CFI = .946; \)

RMSEA = .058

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exception of the path between adolescents’ alcohol use T1 and adolescents’ alcohol use T2. The reason that we did not constrain this path is that we were mainly interested in whether mothers and fathers had a different impact on each child or treated each child differently. The following paths were constrained: ‘Norms mother and Alcohol-specific rules’, ‘Norms father and Alcohol-specific rules’, ‘Norms mother and Adolescents’ alcohol use’, ‘Norms father and Adolescents’ alcohol use’, ‘Alcohol use father and Alcohol-specific rules’, and ‘Alcohol-specific rules and Adolescents’ alcohol use’.

The magnitude of the paths of the older adolescents in the model was significantly different from the magnitude of these paths of the younger adolescents ($Δχ^2(6) = 12.787$, $p < .05$). The difference was due to the path between paternal drinking and alcohol-specific rules. These paths were significantly different for older and younger siblings in a family. The effect of paternal drinking on alcohol-specific rules was stronger for younger adolescents than for older adolescents. The magnitude of all other paths was not significantly different for older and younger adolescents.

In a third step of the analysis, we tested the model again, but then with a sample consisting of non-drinking younger adolescents and their older siblings at T1 ($N = 241$), and with a sample consisting of non-drinking older adolescents and their younger siblings at T1 ($N = 121$). Because we were mainly interested in the finding of the path between alcohol-specific rules T1 and adolescents’ alcohol use T2 of these models, we only discuss the results of these paths.2 In both models with non-drinking adolescents, the path between alcohol-specific rules at T1 and adolescents’ drinking at T2 was significant ($β$ older $= -.58$, $p < .000$; $β$ younger $= -.20$, $p < .05$). This means that parental alcohol-specific rules serve to prevent adolescents from starting to drink. Parents who apply strict rules about drinking to their non-drinking son or daughter are less likely to have drinking adolescents one year later.

Discussion

The aim of the current study was to establish the role of alcohol-specific rules in the development of adolescents’ drinking, and whether these rules are related to parental alcohol use and parental norms about early adolescents’ alcohol use. In accordance with the studies of Wood et al. (2004) and of Yu (2003), we found a strong significant association between having rules about alcohol and adolescents’ alcohol consumption for both older and younger adolescents in a family. Nevertheless, prohibiting adolescents’ alcohol use did not predict adolescents’ drinking one year later. To date, only cross-sectional studies have investigated the topic of alcohol-specific rules; we can only speculate about the reason for the strong cross-sectional findings and for the lack of longitudinal support for our hypothesis. One explanation is that our results might be due to parents adjusting their rules to the drinking of their children. Other studies have underlined the idea of bi-directionality in parent–child relationships (e.g., Laird, Pettit, Bates, & Dodge, 2003; Rueter & Conger, 1998; Van der Vorst, Engels, Meeus, Deković, & Vermulst, 2006).

Another explanation for the lack of longitudinal support for alcohol-specific rules on changes in alcohol use might be that adolescents do not internalize rules over a period of one year. For example, when parents clearly state that their child is not allowed to come home drunk after going out on a particular evening, an adolescent may obey his/her parents; however, if parents do not repeat this rule, an adolescent might not take it seriously or might have forgotten it one year later. This reasoning indicates that family members should report that parents become more permissive over time, but also that research should focus on a shorter interval than one year to examine the effects of rules about alcohol. Furthermore, this line of reasoning could imply that a third variable plays a role, e.g., communication about alcohol-specific rules. We did not explicitly ask our participants whether parents verbally provided rules about drinking. Observing the significant difference in the experience of rules about drinking between parents and adolescents (whereby adolescents report fewer rules than their parents), it might indeed be the case that parents do not verbally convey their rules and perhaps that they assume that their offspring know what the rules are. Moreover, it remains unclear how parents provide sanctions after an adolescent has not followed a rule about drinking. Not perceiving the consequences of behavior might give an adolescent the impression that the rules are not as strict as they originally thought. This might, in turn, affect future drinking.

Does the lack of longitudinal support for alcohol-specific rules in our general model imply that parents are not able to control the drinking of their offspring? Other results of the current study suggest that this is not the case. Based on multiple informants (adolescents, mothers and fathers), which underscores the robustness of the outcome, having strict rules does have a preventive effect on a sub-sample of older and younger adolescents, namely those who had not started to drink at baseline measurement; these adolescents are less likely to take up drinking one year later. This finding demonstrates that parents do have an impact on the development of adolescents’ alcohol use. However, 15-year-olds who do not yet drink can be considered as a minority in the Netherlands (Poelen et al., 2005); these adolescents might have certain

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2 The first author can provide the remaining results of these models.
personality characteristics (e.g., a higher level of conscientiousness) which make them less vulnerable to drinking and more prone to obey their parents’ alcohol-specific rules.

Secondly, we also observed an indirect effect of alcohol-specific rules on adolescents’ alcohol use over time, namely through adolescents’ previous use. Previous alcohol use was a very strong predictor of later alcohol consumption; other studies reported the same finding (e.g., Ferguson et al., 1994; Pedersen & Skrondal, 1998). The magnitude of this indirect effect was equally strong for both older and younger adolescents. Thus, it seems that parents should be strict about alcohol as early as possible and should continue to be strict, because youngsters who drink less in the first place will also be less involved in drinking one year later.

**Parental norms about early adolescents’ drinking**

In line with our expectations, the present study provides evidence for the hypothesized negative association between norms about early adolescents’ alcohol consumption and alcohol-specific rules towards older and younger adolescents in a family. The findings indicate that parents with conservative norms about adolescents’ drinking have strict rules or, stated differently, that parents with more liberal norms tend to be more permissive towards the drinking of their youngsters. We expected that parental norms would be precursors of providing alcohol-specific rules. It seems plausible that parents endorsed these types of norms about adolescents’ drinking before they started imposing rules about alcohol on their children. However, this does not mean that parents never adjust their norms about young adolescents’ drinking on the basis of their parenting behavior or on the drinking of their offspring. It should be noted that, because of the cross-sectional associations in our model, caution is required in interpreting the direction of this association. In addition, the norms about early adolescents’ alcohol consumption of fathers and mothers were cross-sectionally related to the drinking of older and younger adolescents. Fathers and mothers with conservative norms had youngsters who drank less. However, we did not observe this link a year later. Thus, cross-sectionally we found empirical evidence for the direct relation with adolescents’ drinking, which is in accordance with, e.g., Wood et al. (2004), but also for the indirect relation through alcohol-specific rules, which is in accordance with, e.g., Spijkerman et al. (in press). But both the direct and indirect links of parental norms about early alcohol use disappeared over time.

Further, both fathers and mothers in the current study reported relatively conservative norms about adolescents starting to drink at an early age. This outcome corresponds with those of Brody et al. (1999). We do not know, however, whether parents remain relatively conservative with regard to adolescents’ drinking or whether they become more liberal when their children become more mature. Nevertheless, our study revealed that conservative norms about 13-year-olds also have an impact on having rules for 15- or 16-year-olds and on the actual drinking of youngsters.

**Parental alcohol use**

Parental drinking is related to fewer rules concerning both their younger and older adolescents. This indicates that the more parents drink themselves the more permissive they are, or that parents who are strict about adolescents’ drinking drink less themselves. Parents who drink alcohol probably think that they are less credible when providing rules. Parents may notice the alcohol consumption of their children, but feel that they do not have the right to forbid it, because they are drinkers themselves. Another explanation might be that the more alcohol parents consume, the more comfortable they are with youth drinking. Further, it is remarkable that parental drinking was indirectly related to adolescents’ current drinking or drinking over time. This is in contrast with findings of other studies (e.g., Beal, Ausiello, & Perrinn, 2001). However, the drinking of fathers was indirectly related to adolescents’ alcohol use, namely through providing alcohol-specific rules. It seems that the direct influence of parental drinking declines when alcohol-specific socialization is taken into account (Van der Vorst et al., 2005).

**Limitations and strengths**

Although the present study has several strengths, such as its longitudinal design and the multi-informant data, there are some limitations. The cross-sectional part of the current study does not allow us to draw conclusions about causality or possible bi-directional effects between parental norms about alcohol, parental alcohol use, and alcohol-specific rules. It remains unclear whether parental norms about alcohol and parental alcohol use affect having alcohol-specific rules or vice versa. Moreover, it is still unclear whether adolescents’ drinking has an influence on having rules about alcohol use. A longitudinal design with at least three waves would help to unravel possible bi-directional effects. Although we carefully selected families on the basis of, for instance, educational level, the findings cannot be generalized to single-parent families, to families with no biological relation between parent and child, or to families with twins. Also, the 18% participation rate might affect the generalizability of our findings.

Despite the limitations, the current study is one of the first using a full family design which provides insight into the role of alcohol-specific rules on the
development of adolescents’ alcohol consumption. The findings demonstrate that, cross-sectionally, strict rules are related to a lower likelihood of drinking in youth. Although our study has not established longitudinally that alcohol-specific rules are related to changes in adolescents’ drinking, it did yield substantial evidence that being strict about drinking affects the future drinking of adolescents, in terms of postponing alcohol use. Further, the findings show that having alcohol-specific rules depends on other factors, which underlines the complexity of the influence of parenting on the development of adolescents’ alcohol use.

Acknowledgments

Rutger Engels was supported by a fellowship from the Netherlands Organization for Scientific Research (NWO) during the preparation of this manuscript.

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Manuscript accepted 22 June 2006