



Universiteit Utrecht

**Changes in Parental Attitude towards Adolescent Alcohol Consumption as a
Consequence of Adolescent Alcohol Consumption**

Master research project

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Abstract

This longitudinal study extends our knowledge of the influence of adolescent alcohol consumption on parental attitude towards adolescent alcohol consumption. Furthermore, it examines the possible influence of parental alcohol consumption on the relation between adolescent alcohol consumption and parental attitude towards it.

Data used for this study were originally collected in the program Prevention of Alcohol use in Students, following for 4 year a representative sample of Dutch adolescents. For this study the data of 709 pairs of parents and adolescents (average age at T1= 12.1, SD=0.49, N boys=352, N girls=357) was used. Using linear regression analysis, the relationship between adolescent alcohol consumption, parental attitude towards adolescent alcohol consumption and parental alcohol consumption was measured.

Adolescent alcohol consumption accelerates the easing of parental attitude towards adolescent alcohol consumption at all three measurements ($\beta=-.119$, $p<.001$; $\beta=-.067$, $p=.016$; $\beta=-.054$, $p=.042$). Alcohol consumption of parents doesn't have any influence on the speed of change of parental attitude ($\beta=-.020$, $p=.513$; $\beta=.022$, $p=.435$; $\beta=-.007$, $p=.799$).

It is concluded that, although the parents formulate their attitude towards adolescent alcohol consumption, the attitude is influenced by the behavior of the adolescents. This signifies the importance of child effect in child parent relationship and shows how important it is to postpone the start of adolescent alcohol consumption.

Changes in Parental Attitude towards Adolescent Alcohol Consumption as a Consequence of Adolescent Alcohol Consumption

Most Dutch adolescents (84%) have already drunk alcohol by the age of 15. When they do drink, their consumption of pure alcohol (6,4 cl) is one of the highest in Europe (Hibell et al., 2012). Moreover, one third (35 %) of them claim to have drunk at least one glass of alcohol at or before the age of 13 (Verdurmen et al., 2012). As there are serious health and social problems related to early onset of alcohol use, it is not surprising that most parents are strictly opposed to underage drinking (van der Vorst, Engels, Meeus, & Dekovic, 2006). In addition, parents indicate that they would actively prevent their offspring from drinking if they knew about it. However, once parents catch their child drinking, they don't discuss their child's behavior with their child nor undertake disciplinary actions (Beck et al., 1995). Contrary to what parents say they would do, adolescents' alcohol use predicts lower parental control (Huh, Tristian, Wade, & Stice, 2006; Stice & Barrera, 1995) and lower support (Stice & Barrera, 1995). Although it seems to be an unexpected reaction, it corresponds with the findings about parental reactions to adolescent problematic behavior in general. When confronted with youth problems, parents do not increase but in fact decrease their control and support (Huh et al. 2006; Hafen & Laursen, 2009), relinquish the behavioral rules at home (Huver, Engels, Vermulst, & de Vries, 2007) and decrease the number of attempts to change the behavior of their children.

However, there is not much known about why parents choose to react in this way.

There are two perspectives to the parent-child relations, that could help to explain this why parents surrender their influence on their children. Most of the studies of child problem behavior are based on the *social mold model* (Hartup, 1987). This model likens family socialization processes to a mold into which the child is placed and by which it is being formed, without active participation of the child itself. Lack of parental support and control, for example, produces behavioral problems in the child (Jacob & Leonard, 1991), and increases the likelihood of an affiliation with deviant peers (Durbin, Darling, Steinberg,& Brown, 1993). According to this perspective, parents are the initiators of the development of the parent-child relation and the decrease of control of their children is a natural continuation of their insufficient parenting style.

An alternative, the reciprocal effects model states that parenting practices affect children's behavior, but also that child behavior affects parenting practices (Lerner & Spanier, 1978; Sameroff, 1975). This approach covers many theories that are based on the idea that both children and parents determine and influence the development of the child and relationships in the family, so

called child effect. The reciprocal effect model precedes the social mold model, by suggesting that the child's behavior triggers a reaction in the parents. However it is not clear how parents respond to their child's behavior.

Most studies examining parents' reaction to their child's engagement in risk behavior are based on post-hoc analyses and do not explicitly test why parents relinquish their control and influence on their offspring. These studies suggest that the decrease of parental control and support to misbehaving adolescents could be caused by 1) the emotional rejection of adolescents because of their youth problem behavior (Baumrind & Moselle, 1985) 2) the increase of parental tolerance of youth problem behavior (Bell & Chapman, 1986) or 3) the interpretation of youth problem behavior as a need of autonomy (Huver et al., 2007; Kerr & Stattin, 2003).

However, at least two studies have been carried out on the same subject, and have been proposed a priori instead of post hoc. Also these two studies support the idea of reciprocal influences in the parent-child relationship. Kerr & Stattin (2003) proved that parents may feel intimidated by the behavior of their children and monitor them less to avoid conflict situations. Glatz, Stattin, & Kerr (2012) found that, in an attempt to prevent cognitive dissonance, parents change their attitudes to underage drinking and lessen their control. As of now, there is little known about the effects of cognitive dissonance. This study will attempt to confirm and extend the results of the Glatz et al. (2012) study.

To our knowledge, the study of Glatz et al. (2012) is the first and only study that developed and tested the hypothesis about parents' reaction to underage drinking using an established theoretical framework, namely the cognitive dissonance theory (Festinger, 1975). Cognitive dissonance is an aversive state, caused by two conflicting cognitions, connected with strong feelings of discomfort. To reduce the discomfort, one of the cognitions has to be changed. As most of the parents are strongly opposed to underage drinking and average adolescents start to drink alcohol long before they are legally allowed to do so, many parents are exposed to the discomfort of cognitive dissonance. To eliminate the dissonance, they must adjust the behavior (underage drinking) or the attitude (being uncomfortable with underage drinking).

Glatz et al. (2012) found, that some of the parents who encountered their children being drunk changed their attitude and became less opposed to underage drinking in order to reduce their discomfort. On the other hand, parents who also encountered their children being drunk and didn't change their attitude, experienced more worries and the situation for them remained uncomfortable. By testing the direction of the relations between parental attitudes and youth alcohol consumption, Glazt et al. (2012) confirmed that youth drinking predicted changes in

parents' attitudes about youth drinking (more tolerant attitudes) but parents' attitudes did not predict changes in youth drinking. These relations did not differ for different subgroups of adolescents based on age, gender and parental education. However, Glatz et al. (2012) suggested that possible moderator effects of parental alcohol use should also be examined as it is expected that parents' are more likely to adjust their attitudes towards alcohol after catching their child drinking when they drink more alcohol themselves. This expectation is based on research suggesting that parents who drink alcohol themselves may feel more powerless to forbid it (Huver et al., 2007), which is exemplified by the relation between parental drinking and less strict alcohol-specific parenting. Parents who forbid alcohol consumption to their offspring while consuming alcohol themselves, must cope with the cognition that they participate in the very behavior that they forbid. Through being forced to face this issue after discovering that their child started to consume alcohol, they become aware of the health risks not only for the adolescents but also themselves. By underestimating the risks associated with this behavior for their offspring and therefore also for themselves, parents are likely to reduce the cognitive dissonance and the discomfort of the knowledge that their behavior brings them health risks. However, a direct test of the moderation effect of parental alcohol use in the relation between adolescents' drinking and parents' attitudes about alcohol is still lacking.

This study examines the influence of youth alcohol consumption on parental attitudes to underage drinking, and investigates the role of parental alcohol consumption in this relationship. It is expected that 1: Youth alcohol consumption predicts the increase of parental tolerance to youth alcohol consumption and that 2: parental alcohol consumption increases the changes in parental attitude towards youth alcohol consumption caused by previous adolescent alcohol consumption.

Method

Procedure of data collection

The current study makes use of data from a large scale alcohol prevention study in the Netherlands (see Koning et al., 2009; Koning, van den Eijnden, Verduren, Engels, & Vollebergh, 2011). For the purpose of that study 20 schools were randomly assigned to one of the three intervention conditions or to the control condition. Because the interest of this study is different to that of the original study, there was a risk that the outcome would be affected by the interventions. Therefore, only data from adolescents and parents assigned to the control condition were included. From the 5 schools originally randomized into this group, one could not participate because of

reasons unrelated to the study.

All first year students at these schools and their parents were invited to participate in the study. For students, this was administrated by trained research assistants using online questionnaires, available at a secured website. Students who didn't want to participate were free to refuse at the day of data collection. Questionnaires for parents were sent to their home address, together with a letter of informed consent. Only 0.01% of parents refused the participation of their child. Parents who didn't react were reminded three weeks later by a letter, and non-responding parents were contacted another two weeks later by telephone.

Parental as well students' data were collected at baseline in September/October 2006 and then 10 (June/July 2007), 22 (June/July 2008) and 34 (June/July 2009) months later.

Participants

Data used from this study were collected under 935 adolescents at four schools. Due to the initial non-response ($n = 124$) and pre-selection of adolescents reporting no or maximal alcohol glass of alcohol consumption per week at baseline (70 excluded), only 741 couples of adolescents and their parents were eligible for analysis. Later were another 11 couples excluded because of participation only at the baseline measurement and 21 couples due to extremely high values on alcohol consumption of adolescents at T2, T3 and T4. As extremely high were considered values with standard deviation higher than 3 at that moment of measurement. The final adolescent sample consisted of 352 boys and 357 girls, on average 12 years old ($M = 12.1$ $SD = 0.49$) at T1, 8.1% of them attended pre-university education, 29.1% attended higher general secondary education, 8.2% attended combined form of higher and lower secondary education and 54.6% attended lower secondary vocational education. The most of the adolescents lived home with both parents (83.4%), 12.7% lived with only one of the divorced parents and 3.9% lived with only one parent of some other reason. 56.5% adolescents said to be raised within a religion, namely as Roman Catholics (36.2%), as other Christians (12.4%) as Islamists (4.4%) or within other religion (3.4%). 43.3% said to not be religious.

However not all parents participating on this study provided personal information, we know that of the 666 parents who did 17.6% (117) were fathers and 82.4 (549) were mothers. Most of them were in the age between 35 and 49 (80.5%), 3.4% were younger then 34 years, 16.3% older then 50 years.

Measures

Adolescent Alcohol Use

Youth alcohol use was measured by using the Quantity- Frequency measure. This represented the average weekly alcohol use. Quantity was measured by questioning how many glasses of alcohol the adolescent usually consumes on a weekday, Monday to Thursday, and on a weekend day, Friday to Sunday (Engels, Knibbe, & Drop, 1999). Frequency was measured by questioning the number of days the adolescent drank during the week and on the weekend (Engels & Knibbe, 2000). Quantity-Frequency was found by calculating the products of the number of days and the number of glasses, and then summing the two products for weekdays and weekend days. It was chosen to use the self-report measures of adolescents on alcohol use, because these have proven to be reliable and valid methods to measure alcohol use (Del Boca & Darkes, 2003).

Parents' Attitudes towards Youth Alcohol Consumption

Parental attitude to youth alcohol consumption was measured by asking parents how acceptable it is for an adolescent of the age of their child to drink one or more glasses of alcohol at 8 different opportunities, such as at home during dinner, at a family celebration or by a friend's home. Parents could choose if they find such a behavior to be absolutely unacceptable (1), unacceptable (2), a bit acceptable (3), acceptable (4) or very acceptable (5). The final score was formulated by calculating the average, but only if at least seven out of the eight questions were answered. Internal consistency of this construct was measured by Cronbachs alpha (.822) and was considered to be adequate for the research purposes.

Parental Alcohol Use

Parental alcohol use was measured by using the same Quantity- Frequency measure as has been used for the alcohol consumption of adolescents.

Statistical Analyses

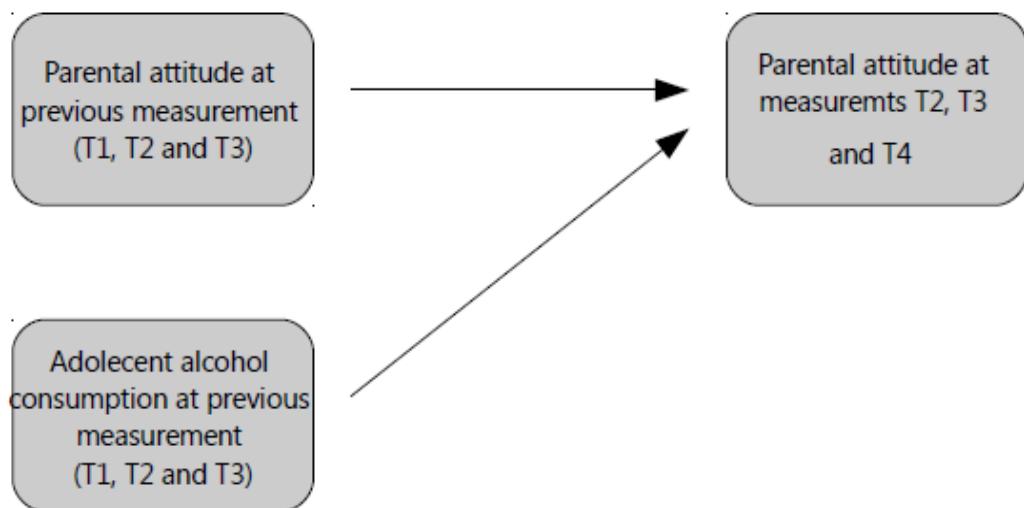
Missing values. Due to the longitudinal design of the study, adolescents and their parents were asked four times to participate at the study. However, not all the respondents could participate all times. Therefore, missing data analysis was used to calculate the missing values.

Descriptive analyses. For description of the sample, means and standard deviations of all measured variables (age adolescent, adolescent alcohol use, parental alcohol use, and parents' attitude towards youth alcohol consumption) were computed. To measure the correlations between the variables, bi-variate Pearson correlation has been done.

Measurements of the effects. To answer the question if there is a relationship between

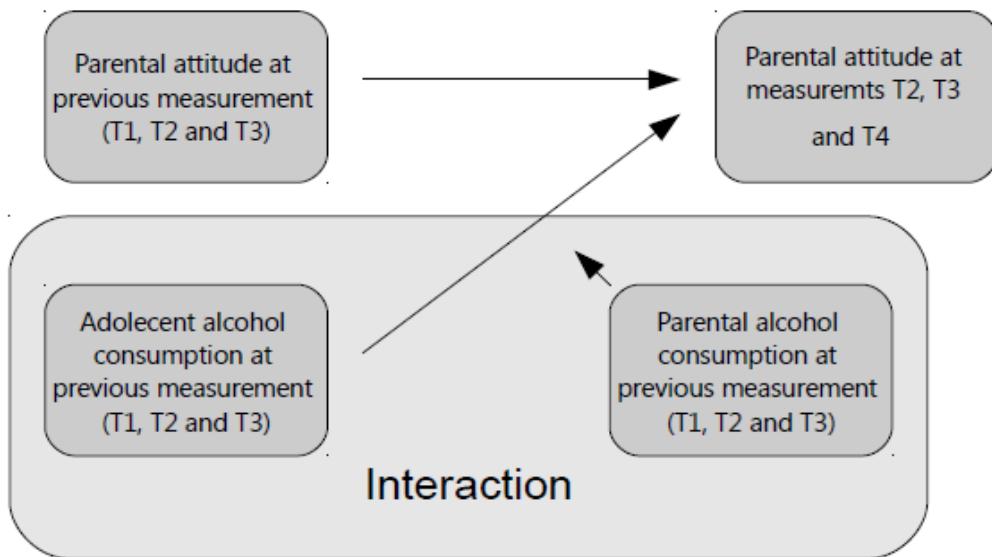
adolescent alcohol consumption, parental attitude and parental attitude towards underage alcohol consumption, multiple linear regressions has been used. As can be seen in Figure 1 the effect of adolescent alcohol consumption at T1 on parental attitude at T2 was analyzed, controlling for value of parental attitude at T1. The same analyses has been done for the effect of adolescent alcohol consumption at T2 on parental attitude at T3, controlled for parental attitude at T2, and for the effect of adolescent alcohol consumption at T3 on parental attitude at T4, controlled for parental attitude at T3. In all analyses, there was controlled for gender and level of education.

Figure 1. Regression Model of the Effect of Adolescent Alcohol Consumption at Previous Measurement on Parental Attitude at T2, T3 and T4, Controlled for Parental Attitude at Previous Measurement



Further, multiple regression analyses has been used to determinate the effect of interaction between parental and adolescent alcohol consumption on parental attitude one year later. Interactions of alcohol consumptions at T2 and T3 were used to predict their effect on parental attitudes at T3 and T4. These interactions were computed by multiplying the centered values of parental and adolescent alcohol consumption. Also in this part of the analyses was controlled for parental attitude at previous measurement, gender and level of education. This model is shown in the Figure 2.

Figure 2. Regression Model of the Effect of Interaction between Adolescent Alcohol Consumption and Parental Alcohol Consumption on Parental Attitude at T2, T3 and T4



Results

Descriptive Data

As can be seen in Table 1 the average alcohol consumption by adolescents increased at each moment of data collection, as well as the deviation between alcohol consumption of individual adolescent. The parental alcohol consumption didn't change over the time, neither did the deviation between alcohol consumption of individual parents. Parental attitude towards adolescent alcohol consumption decreased over time and became less negative.

Table 1

Average Amount of Consumed Glasses of Alcohol per Week by Adolescents and Parents and Average Parental Attitude to Adolescent Alcohol Consumption at T1, T2, T3 and T4 (N= 709)

	M (SD)			
	T1	T2	T3	T4
Adolescent alcohol consumption per week	0.1 (0.3)	.43 (1.21)	1.04 (3.1)	3.59 (6.14)
Parental alcohol consumption per week	4.7 (5.94)	4.81 (5.97)	4.77 (5.71)	4.67 (5.29)
Average parental attitude to adolescent alcohol consumption	4.64 (0.36)	4.66 (0.33)	4.57 (0.36)	4.39 (0.41)

Correlations. To determine if there is a correlation between gender, school level, alcohol consumption by adolescents, alcohol consumption by parents and parental attitude at T1, T2, T3 and T4, Pearson correlation was used (Table 2). There are very few significant correlations between the parental and adolescent alcohol consumption. In contrast, there are significant negative correlations between the parental attitude and adolescent alcohol consumption. It seems that more adolescent alcohol consumption associates with less strict parental attitude. Lastly, there are negative, mostly significant correlations between the parental attitude and parental alcohol consumption. Higher parental alcohol consumption associates with less strict parental attitude.

Effect of Adolescent Alcohol Consumption on Parental Attitude to Underage Drinking

Table 3 displays the results of the effect of adolescent alcohol consumption on parental attitude while controlling for parental attitude at previous measurement, gender and school level. It shows that alcohol consumption of adolescents significantly predicts parental attitude towards underage drinking at all three measure moments. Higher rates of drinking predict less strict parental attitude ($\beta = -.12$, $p < .001$; $\beta = -.07$, $p < .01$; $\beta = -.054$, $p < .05$). The variation explained through these models is increasing over time, namely 36.1%, 48.4% and 54.8%.

Moderation of the Relationship between Adolescent Alcohol Consumption and Parental Attitude by Parental Alcohol Consumption

The moderation by parental alcohol consumption does not significantly predict the relationship between adolescent alcohol consumption and parental attitude ($\beta = -.02$, $p = .513$, $\beta = .02$, $p = .435$, $\beta = -.007$, $p = .799$). The variation explained through these models doesn't differ significantly from the variations explained by the models without interaction (36.1%, 48.5% and 55%). It shows that parental alcohol use does not significantly moderate the relationship between adolescent alcohol consumption and parental attitudes.

Table 2
 Pearson Correlation Between Gender, School Level, Alcohol Consumption by Adolescents (AC adolescent) and by Parents (AC parent) and Parental Attitude to Adolescent Alcohol Consumption at T1, T2, T3 and T4 (n=709)

	Gender	School level	AC adolescent T1	AC adolescent T2	AC adolescent T3	AC adolescent T4	AC parent T1	AC parent T2	AC parent T3	AC parent T4	Parental attitude T1	Parental attitude T2	Parental attitude T3	Parental attitude T4
Gender	1													
School level		*	1											
AC adolescent T1		-.084		1										
AC adolescent T2			-.039	**	1									
AC adolescent T3				-.148		1								
AC adolescent T4					-.092	**	**	**	**	1				
AC adolescent T3						.000	*	*	**		1			
AC adolescent T4							-.097	.089	.515					
AC adolescent T4								-.111	.183	.373	.499	1		
AC parent T1								**	-.071	**				
AC parent T2									-.015	.063	.030	.070	1	
AC parent T3										-.008	.052	.064	.061	**
AC parent T4											**	.865	1	
AC parent T3												**	**	1
AC parent T4													**	1
Parental attitude T1												*	**	1
Parental attitude T2													*	**
Parental attitude T3														1
Parental attitude T4														1

*. Correlation is significant at the .05 level (2-tailed).

**. Correlation is significant at the .01 level (2-tailed).

Table 3

The Effect of Adolescent Alcohol Consumption on Parental Attitude to Underage Drinking, Controlled for Gender, School Level of Adolescent and Parental Attitude to Underage Drinking at the Previous Measurement (n=709)

	Parental attitude T2	Parental attitude T3	Parental attitude T4
	Beta	Beta	Beta
Gender	-.027		
School level	.019		
Parental attitude T1	.57***		
Adolescent alcohol consumption T1	-.12***		
Gender		.001	
School level		.062	
Parental attitude T2		.67***	
Adolescent alcohol consumption T2		-.07**	
Gender			.040
School level			.051
Parental attitude T3			.72***
Adolescent alcohol consumption T3			-.054*
R square	.361	.484	.548

* = p < .05; ** = p < .01; *** = p < .001, two-sided

Note. Listed data are derived from the last step of the stepwise regression.

Discussion

This study aims to expand the knowledge of the effect of adolescent alcohol consumption on parental attitudes and explore the role of parental alcohol consumption in this relationship. It shows that higher levels of alcohol consumption in adolescents predict less strict attitudes toward alcohol in parents. The influence of adolescent alcohol use on parental attitudes towards alcohol does not depend on the parents' own drinking behavior. Complementing previous research demonstrating the negative influence of parental attitudes on adolescents drinking (e.g. Stafström, 2014), the current findings reveal that alcohol use of adolescents also change parents' attitudes towards alcohol.

The more alcohol an adolescent consumes, the less strict the parental attitude towards underage drinking becomes. This finding is in opposition to the majority of previous research about what parents claim they would have done if they had discovered the adolescent alcohol consumption (Beck, Scaffa, Swift, & Ko, 1995; Tyler, Tyler, Kaljee, & Hopps, 1994). For example, Beck has found that most of the parents would discuss it with the child and discipline him/her, which is in opposition to our findings. However, the results of the current study are in line with previous research about what parents actually do when they find out about adolescent alcohol consumption. These studies show that parents react by decreasing their parental control (Huh, Tristan, Wade & Stice, 2006), support (Stice & Barrerra, 1995) and attitude towards alcohol consumption (Glatz et al., 2012). The research of Glatz et al. (2012) found a weakening of parental attitudes as a response to catching their child drunk. In contrast to the dichotomous scale Glatz et al. (2012) used, this study used the amount of individual drinks as a measure for adolescent alcohol consumption, which allows us to confirm that parental attitude is already modified as a result of the knowledge of any alcohol consumption by their adolescents .

The increase in parents' tolerance as a reaction to adolescents' alcohol use can be explained by the theory of cognitive dissonance (Festinger, 1975). Cognitive dissonance is an aversive state, caused by two conflicting cognitions, connected with strong feelings of discomfort. Many parents experience the discomfort of cognitive dissonance, because they are strongly opposed to underage drinking and on average, adolescents start to drink alcohol long before they are legally allowed to do so. To prevent an uncomfortable conflict of contradictory cognitions, parents tend to choose one cognition and minimize the significance of the other. In line with previous studies on health-compromising behavior which show that users prefer to ignore the health risk instead of change their behavior (Peretti-Watten, 2006; Mäkelä, 1997). also parents tend to adjust the attitude (being

uncomfortable with underage drinking) instead of changing the drinking behavior in their offspring.

Contrary to expectations, the influence of adolescents' alcohol use on parental attitudes did not differ for different levels of parental drinking, which means that parents do not adjust their attitude to their own drinking behavior. It seems that other influences play a role in the relationship. A possible explanation is the pressure of social and legal norms. At the moment of data collection, the legal norm said that adolescents under the age of 16 were not allowed to consume alcohol. The corresponding social norm was less strict, as it allowed adolescents to consume alcohol with a low alcohol percentage, such as wine and beer, but not to become drunk. Since parents are viewed as being part of the same entity as their offspring, they are responsible for the behavior of their offspring, and therefore they are also expected to respect the social and legal norms. Out of the cognition theory we expected that parents who consume alcohol themselves would easily increase the tolerance to the alcohol consumption of their offspring's. By this they would prevent the cognitive dissonance caused by forbidding something because of the health and social risks and doing it at the same time. However, the pressure of social and legal norms is clearly higher and doesn't allow parents to do that. Therefore, parents do not adjust the tolerance level towards the alcohol consumption of their offspring regardless of their own alcohol consumption.

Implications

The results of this study show that even if parents formulate their attitude towards underage alcohol consumption, adolescents are able to change it through their own behavior. As we know that parental attitude has a mutual effect on children behavior (Stafström, 2014), these findings underline how important it is to prolong the alcohol free period in adolescents. Preventive interventions, such as Prevention of Alcohol use in Students (PAS; Koning et al., 2009) seem to be more important than harm reduction at this stage of adolescence.

Emphasizing the significance of child effect, this study delivers a contribution to the stream of research on bidirectional relationships between parents and children. The knowledge that not only children but also parents are being influenced through the actions of the other one helps us to understand the development and complexity of the family relations. Therefore, the results of this study underline the importance of further investigation of child effect and show how important it is to not ignore it in further research and implications.

Strengths and limitations

There are several limitations to our study. The interval of data collection (10 months between T1 and T2 and 12 months interval between other measurements) has not been ideal for the purposes of this study. Especially at the critical age between 14 and 16 years it would be more informative to collect data more frequently, so detailed information about the development of parental attitude were available. Secondly, the alcohol use of the adolescent is reported by the adolescent him/herself instead of parents' perception of their offspring's alcohol use. This may have affected our results as some parents may not have known that their child is drinking. In future studies, both adolescent and parent reported alcohol use should be included.

This research is one of the few that examines child effects in the alcohol-specific socialization context. It has been carried out on a large data set of a representative study, which gives us the opportunity to generalize the results to a larger population of adolescents. Adolescents included in the study were in the range of 12 to 16 years, which is the time when youth usually start to consume alcohol (Soellner, Göbel, Scheithauer, & Bräker, 2014). Therefore, this period is critical for the development of parental attitudes and can also provide us with the most information. Thanks to its longitudinal design, we formulate causal relations between the variables and we could state that parental attitude is being influenced by adolescents' behavior.

Suggestions for future research

During this study other questions arose which should get the attention in future research.

As the legal norm for adolescent alcohol consumption has changed in the Netherlands a couple of years after completing of the data collection and we expect that the legal norms have an effect on parental attitude, it is important to investigate the actual impact of this norm. Changes in the Dutch legal system, forbidding Dutch adolescents to consume any alcohol under the age of 18 are creating a suitable opportunity for a comparison study.

Furthermore, the sample of this study consisted of adolescent in the age of 12 to 16 years. It would complete our knowledge to investigate the effect of adolescent alcohol consumption on parental attitude also at later age, such as 17 to 20 years old.

As we measured only one direction of the parent-child relationship, investigation of this reciprocal relationship in one model would significantly contribute to our knowledge about this theme.

This study confirms that there is a significant child-effect in the relationship between parental attitude towards adolescent alcohol consumption and adolescent behavior and rejects the effect of parental alcohol consumption on this relationship. These findings contribute to our understanding of the development and complexity of the family relations and provide crucial knowledge about the importance of alcohol prevention programs.

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