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Parental Marital Quality and Adolescent Problem Drinking; Exploration of Psychological
Control as Mediator.

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Abstract

Adolescent problem drinking is a big problem in the Netherlands. To prevent this problem, interventions should be focused on the factors that may predict this behavior. Marital quality is an important factor in the family system that influences different behavioral outcomes of children. In the current study, we test if marital quality predicts adolescent problem drinking, and if the specific parenting practice, psychological control, is a mediator of this relation. To answer this question, we used data of three waves from the longitudinal study 'Family and Health' (Harakeh, Engels, de Vries, & Scholte, 2005). Participants in this study were 415 two-parent families with two adolescent children, from which we used the data of mother, father and the youngest child. Marital quality was not found to predict adolescent problem drinking. This result suggest the suggested mediation model is not present. However, it was found that psychological control predicts adolescent problem drinking. Implications for future research are being discussed.

Keywords: Marital quality, problem drinking, psychological control

Probleem drinken onder adolescenten is een groot probleem in Nederland. Om dit probleem te voorkomen, zullen interventies zich moeten richten op factoren die dit gedrag kunnen voorspellen. Kwaliteit van de huwelijksrelatie van ouders is een belangrijke factor in het familiesysteem dat verschillende gedragingen van kinderen beïnvloedt. In huidig onderzoek testen we of de kwaliteit van de huwelijksrelatie een voorspeller is van probleem drinken onder adolescenten en of de specifieke opvoedingsstrategie psychologische controle als mediator optreedt. Om deze vraag te beantwoorden is gebruik gemaakt van drie waves van de longitudinale studie 'Family and Health' (Harakeh, Engels, de Vries, & Scholte, 2005). De participanten van dit onderzoek waren 415 tweeoudergezinnen met twee adolescente kinderen, waarvan de data van vader, moeder en het jongste kind werd gebruikt. De kwaliteit van de huwelijksrelatie bleek geen voorspeller van het probleem drinken van het adolescente kind. Dit resultaat suggereert dat het voorgestelde mediatie model niet aanwezig is. Echter, er is gevonden dat psychologische controle het probleem drinken van adolescenten voorspelt. Implicaties voor verder onderzoek worden besproken.

Parental Marital Quality and Adolescent Problem Drinking; Exploration of Psychological Control as Mediator.

Problem drinking (i.e., alcohol drinking that intervenes with daily activities) among adolescents is a big problem in the Netherlands (Verdurmen et al., 2012). The majority of children drink alcohol when under age (Verdurmen et al., 2012), and some adolescents drink so much alcohol they need to be hospitalized with reduced consciousness (Bouthoorn, van Hoof, & van der Lely, 2011). Drinking alcohol intervenes with the development of the brain, for example adolescents who use alcohol are found to have a significant smaller left hippocampal compared to those who did not (Medina, 2007). Because of the damaging effects of alcohol on adolescents, the government wants to take action against problem drinking among adolescents, by raising the age at which purchase and possess of alcohol is allowed (Rijksoverheid, n.d.). In order to develop effective interventions to prevent problem drinking among adolescents, we need to know which factors predict this problem behavior.

An important factor in the development of children is the family, because a child is embedded in a family system (Fincham, 1998). Research suggests that exposure to a negative family environment sensitizes a child's concerns about their emotional security. In turn, a low emotional security can manifest in different negative developmental outcomes such as high levels of behavioral and self-reported distress, avoidance, involvement, and negative representations of interparental relationships (Davies, Cummings, & Winter, 2004). Research has also shown that the family context is specifically linked to the drinking habits of adolescents (e.g. Laghi, Baiocco, Lonigro, Capacchione, & Baumgartner, 2012). For example, it has been found that weak family bonding was related to frequent and excessive drinking among adolescents (Kuntsche & Keundig, 2006). Therefore, it is likely to assume that certain factors in the family context can be predictors of problem drinking among adolescents.

According to the psychoanalytic theory, marital disruption, as part of the family context, is viewed as affecting the child's sense of security and is linked with the development of delinquency (Fincham, 1998). Research has indeed shown that marital quality can have an effect on problem behaviors of children (e.g. Fauber, Forehand, Thomas, & Wierson, 1990; Kempton, Thomas, Forehand, 1989; Cui, Donellan, & Conger, 2007). For example, previous research has found that marital conflict as reported by adolescents and parents, predicts deficits in adolescent functioning, such as cognitive competence, prosocial competence, internalizing problems, externalizing problems, and health problems (e.g. Wierson, Forehand, & McCombs, 1988; Nicolotti, El-Sheick, & Whitson, 2003). In this sense, marital quality

might be an important factor in the family context that influences the development of adolescents problem drinking.

The negative relation between marital quality and problem behaviors of children is well established, but the process that underlies this relationship is not yet fully understood. One of the processes studied, is the impact that marital problems has on parenting behavior, and in turn, the impact of this parenting behavior on problem behaviors of adolescents. For example, marital distress at time one was related to a negative parenting style 1 or 2 years later, and this was in turn related to adolescent poor emotional well-being, externalizing problems, and internalizing problems another 2 years later (Cui & Conger, 2008). The influence of marital quality on the parenting practices parents use, is evidenced by several studies (e.g. Goldberg & Easterbrooks, 1984; Coln, Jordan, & Mercer, 2012; Dadds, Sheffield, & Holbeck, 1990). For example, marital satisfaction seems to predict parenting behaviors of a couple over time (Ha, Overbeek, Vermulst, & Engels, 2009). More specifically, if parents were more satisfied with their marriage, it predicted they were less likely to exert psychological control, more likely to exert behavioral control and more likely to display parental support to both children later on. This suggests that the relation of marital quality and adolescent problem behavior can be partly explained by its impact on parenting behavior.

Parenting practices in turn were found to predict alcohol use among adolescents. For example, it was found that more parental overprotecting, predicts more adolescents alcohol use (Visser, de Winter, Vollebergh, Verhulst, & Reijneveld, 2012). It has been found that psychological control, as a specific parenting practice, predicts adolescents problem behavior, for example internalizing problems (e.g., Fauber et al., 1990; Ha et al., 2009). Little is known about whether psychological control is also a parenting practice that may predict drinking behavior of adolescents. To our knowledge, to date one study has explored the influence of psychological control on the use of alcohol among adolescents (Van der Vorst, Engels, Meeus, Deković, & Vermulst, 2006). Their research indicates that use of more psychological control does not increase the likelihood that adolescents will drink heavily. This is in contradiction with the results discussed above showing parenting practices to have an influence on alcohol use of adolescents, and more psychological control to increase problem behaviors of children. This difference may be due to the young age ($M_{age} = 12.3$) of the participants used in the study of Van der Vorst et al. (2006), at which drinking is less common

than at any older age. So, the exact role of psychological control in relation to alcohol use among adolescents is not yet well established.

More research is needed to understand the suggested relation between marital quality and adolescent problem drinking and its underlying process. To our knowledge, the current study is the first study to investigate the relation between marital quality and adolescent problem drinking over time, and whether the level of psychological control parents use, is the underlying process of this relationship. We expect to find marital quality to predict adolescent problem drinking. Because our research is longitudinal, we predict that lower marital quality at time one, predicts more adolescent problem drinking at time two and three. We expect psychological control to mediate the relationship between marital quality and adolescent problem drinking. This will show that marital quality affects adolescent problem drinking partly through its impact on the psychological control parents use.

Method

Participants

Participants were 415 two-parent families with two adolescent children. Only the youngest sibling was included in this study, who were closer to the minimum age at which alcohol use is permitted, enabling us to look at the development at an earlier stage. At wave 1, the youngest siblings were between 13 and 15 years old ($M= 13.35$, $SD= .50$) and 47.2 percent was male. Of the participants, 98.8 percent was of Dutch origin. The adolescents equally represented the low (in Dutch LWOO and VMBO; 35.9 %), middle (HAVO; 36.1 %) and high (VWO and WO; 26.8 %) educational level.

Procedure

The data used was collected as part of the longitudinal study 'Family and Health' (Harakeh, Engels, de Vries, & Scholte, 2005). For the current study, data of wave 3, 4 and 5 were used. Families were selected from the register of 22 municipalities in the Netherlands and they received an invitation letter to participate in this longitudinal study. Eight hundred eighty-five families responded and families were then selected under the following conditions; 1) the parents had to be married or living together, 2) the family members had to be biologically related and 3) the participating children were neither twins nor mentally or physically disabled. Eventually 428 families were selected to participate to ensure an equal

distribution of the educational level of the adolescents and an equal amount of possible sibling dyads. Interviewers did five house visits, once a year beginning in the year 2002. During these visits, each family member filled in a set of questionnaires. This was done individually and participants were asked to sit apart and not to discuss while completing the questionnaires. When all four family members completed the questionnaires, the family received €30 as a compensation for their participation. The participants received no information on the hypotheses tested in the current study.

Measures

Marital quality. Experienced marital quality was measured using an adaptation of the Dyadic Adjustment Scale (Spanier, 1976). The questionnaire contains 19 items and was filled in by each parent resulting in one marital quality score of the parents in one family. The parents could answer the questions on several point scales, namely 2, 3, 4, 6, 7 and 8 points scales. An example of a question is: How happy are you and your partner, taken all of it together, with your current relationship or marriage? Parents could give their answers on a 7 point scale (1 = *totally happy* and 7 = *totally unhappy*). Another example of a question is: Do you ever wish you never got married? Parents could give their answers on a 4 point scale (1 = *I never make that wish* and 4 = *I often make that wish*). Cronbach's alphas were .92 for wave 3, .92 for wave 4, and .91 for wave 5.

Problem drinking. To measure adolescents problem drinking, the adolescents completed a questionnaire about problem drinking, adapted from 'Rutgers Alcohol Problem Index' (White & Labouvie, 1989). This questionnaire contains 18 statements that were answered on a five point scale (1 = *never* and 5 = *very often*). The questionnaire includes statements like 1) Because of drinking alcohol, you could not make homework, 2) You went to school or work, while you were under the influence of alcohol, 3) You passed out or got unconscious because of drinking alcohol. Cronbach's alphas were .86 for wave 3, .87 for wave 4, and .90 for wave 5.

Psychological control. Adolescents filled in a questionnaire about their perceptions of parents' use of psychologically manipulative strategies to control their behaviors. This questionnaire contains 8 items that were answered on a five point scale (1 = *completely not true* and 5 = *completely true*). It contains items like; 1) My mother acts cold and unfriendly when I do something she does not like, 2) My mother says her ideas are the right ones, and

that I should not question them. Cronbach's alphas were .86 for wave 3, .87 for wave 4, and .89 for wave 5.

Strategy of analyses.

All analyses are done in IBM SPSS Statistics (version 21.0). Missings were replaced by the mean score of each item. Outliers were located and replaced by the mean score plus two times the standard deviation. We used the total scores of each participant on a questionnaire to determine the score on a variable. Some answers on the marital quality items were reversed, so that a high score on marital quality represented a low amount of marital quality. Marital quality appeared to be stable over time (wave 3 to 4 $t(414) = .99, p = .32$, 4 to 5 $t(414) = .19, p = .85$, and 3 to 5 $t(414) = 1.07, p = .28$), allowing us to use marital quality at wave 3 as predictor at all three waves. The mediation model shown in figure 1 is tested at 3 waves as Baron and Kenny suggested in their paper (1986). This includes linear regression analyses of line a, b, and c. When these are found to be significant, there is reason to believe there could be mediation. Then line c will be tested when controlled for line a. If line c is found to be significant, there is mediation. Age and gender were included as covariates in these analyses.

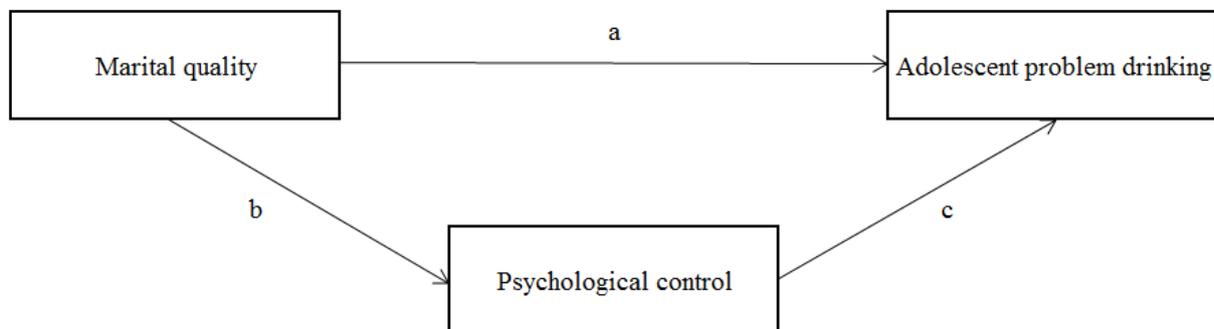


Figure 1
The suggested mediational model.

Results

In preliminary analyses, we checked the assumptions of a normal distribution. Because the data was found to be left skewed, the scores on adolescent problem drinking were transformed into z-scores. Boys were found to score higher on adolescent problem drinking than girls at all three waves (wave 1: $p < .01$, wave 2: $p < .01$, wave 3: $p < .01$). Adolescent problem drinking was found to increase over time ($p < .01$). Psychological control was found

to decrease over time ($p = .03$). Table 1 shows the means and standard deviations of the variables. The correlations between the variables are shown in table 2.

Table 1

Mean and standard deviations of marital quality, adolescent problem drinking and psychological control.

	<u>Wave 3</u>		<u>Wave 4</u>		<u>Wave 5</u>	
	M	SD	M	SD	M	SD
Marital quality	36.75	6.36	36.52	5.88	36.49	5.13
Adolescent problem drinking	21.94	4.51	22.56	4.67	22.86	4.73
Psychological control	17.67	4.20	17.22	4.09	17.24	3.80

Table 2

Pearson's R of the variables, reported per wave 3, 4 and 5.

	<u>Adolescent</u>					
	<u>Marital quality</u>			<u>problem drinking</u>		
	3	4	5	3	4	5
Adolescent problem drinking	.06	.03	.07			
Psychological control	.11*	.12*	.10*	.20**	.22**	.27**

*Note. * Significant at the .05 level. ** Significant at the .01 level*

Testing the mediation model (see figure 1)

Line a. Linear regression analysis was used to test if marital quality at wave 3 significantly predicted adolescent problem drinking. The results indicate that marital quality did not predict adolescent problem drinking at all three waves (see table 3).

Line b. Linear regression analysis was used to test if marital quality at wave 3 significantly predicted psychological control. The results of the regression analyses indicate that marital quality predicted psychological control at wave 3, but did not predict psychological control at wave 4 and 5 (see table 3).

Line c. Linear regression analysis was used to test if psychological control significantly predicted adolescent problem drinking. The results indicate that psychological control predicted adolescent problem drinking at all three waves (see table 3).

The assumptions for mediation are not met because not all three lines were significant. Hence, the next regression analysis, line c controlled for line a, will not be performed.

Table 3

Outcomes of regression analyses.

	Line	Wave 3			Wave 4			Wave 5		
		B	SE	β	B	SE	β	B	SE	β
Marital quality wave 3 - Adolescent problem drinking	a	.01	.01	.07	.01	.01	.07	.01	.01	.07
Marital quality wave 3 - Psychological control	b	.08	.03	.12*	.05	.03	.08	.02	.03	.04
Psychological control - Adolescent problem drinking	c	.04	.01	.17**	.05	.01	.19**	.06	.01	.25**

Note. * Significant at the .05 level. ** Significant at the .01 level

Discussion

The aim of this study was to examine whether marital quality predicts adolescent problem drinking through its influence on the psychological control parents use. We looked at the parents and youngest child of two-parent families with two adolescent children at three time points. Although previous studies found that marital quality predicts problem behaviors of children (e.g. Fauber et al., 1990; Kempton et al., 1989; Cui et al., 2007; Wierson, Forehand, & McCombs, 1988; Nicolotti, El-Sheick, & Whitson, 2003), marital quality did not predict adolescent problem drinking in this study. Because we did not find marital quality to predict adolescent problem drinking, there was also no evidence for the mediation role of psychological control. In addition, when looking at the relationships between these three, we found that marital quality at wave 3 predicts the use of psychological control at wave 3, but not in wave 4 and 5. This was not in correspondence with earlier research on which we expected to find this relationship at all three waves (Ha, Overbeek, Vermulst, & Engels, 2009). Further, we did find psychological control to predict adolescent problem drinking. This is consistent with earlier studies where it was found that parenting practices are related to alcohol use of adolescents (Visser, de Winter, Vollebergh, Verhulst, & Reijneveld, 2012; Fauber et al. 1990).

The fact that our results do not show all the expected relationships could be explained by the origins of the participants, and use of older adolescents compared to previous studies. It seems likely that the influence of marital quality is different in certain cultures and at certain ages. Secondly, perhaps marital quality does influence certain problem behaviors as shown in previous research, but not specific problem drinking behaviors among adolescents. Further, a reason for why we did not find marital quality to predict problem drinking could also be that

adolescents may not notice the real problems or low quality that parents experience in their marriage. It is logical to assume that a low marital quality will be of influence of the atmosphere at home. Maybe at adolescence, the child is less often at home and therefore does not notice this atmosphere indoors as much as a younger child will. However, parenting rules and manners are probably still present, even when a child is less often at home. Therefore, it is likely that psychological control did still have an influence on the adolescents. Finally, the fact that we found marital quality to predict psychological control in an earlier wave but not in the later, could perhaps be due to the duration of the status of marital quality. It may be that people get used to a low satisfying marriage, and over time it will not influence the amount of psychological control parents use towards their children that much.

To our knowledge, this was the first study that looked at the suggested mediation model of these three constructs. A lot of families were participating, so we had a big sample. This ensured that we could get a good impression of reality. Furthermore, several family members of the same family participated, enabling us to gather information from different perspectives. Another strong point of this study is that it was longitudinal and at all waves, the parents and children had to fill in the same questionnaires. Therefore, the coherence between aspects could be tested at different times and ages. It should be recognized that the participant group was a homogenous group. Almost all the families that participated were of Dutch origin and the family structure was very specific. The parents were together during the study, had two children and these children did not have any disabilities. This is why the results are good generalizable to families with these features. Despite the strong aspects of this study, several limitations need to be addressed. First, the homogeneity of the participant group just discussed is also a limitation. The Dutch population does not only exist of families with the same features as the participating families, and thereby the sample was not representative of the Dutch population. This should be taken into account when generalizing the results to the Dutch population. Secondly, there were a lot of missings in the data. 64 families stopped participating in the study after wave 3, and sometimes a family member did not fill in a questionnaire during a wave. The reason for these missings and stopped families is unknown.

In future research, more specific parenting practices could be tested that may predict adolescent problem drinking. The more we know of the specific parenting practices that influence this problem behavior, the better interventions could be developed. Further, the relationship that was found between psychological control and adolescent problem drinking could lead to a longitudinal intervention study. It is interesting to find out if an intervention

will lower the amount of psychological control parents use, and if this indeed will decrease problem drinking of adolescents over time. Such a study would be of great relevance for authorities who want to prevent adolescent problem drinking. They could provide such an intervention program for parents when it is found to be effective. Finally, it will also be interesting to find out if the relationship between psychological control and adolescent problem drinking is present in populations with a different origin.

This study shows that the use of psychological control predicts problem drinking among adolescents. This finding could lead to interventions for parents that focus on parenting practices, specifically at lowering psychological control. Also preventive information could be given about the influence of using psychological control towards your child on problem drinking behaviors of your child.

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