UNIVERSITÀ DEGLI STUDI DI PADOVA

Dipartimento di Scienze Economiche "Marco Fanno"

BOWLING ALONE, DRINKING TOGETHER

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November 2007

"MARCO FANNO" WORKING PAPER N.55

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November 7, 2007

Abstract

Alcohol consumption may be associated to a rich social life, but its abuse might be related to a poor social life. This paper investigates whether alcohol consumption is a socially enjoyed good (a complement of social relations) or a substitute for social relations. In particular, it explores whether the answer changes between use and abuse, beer, wine and spirits, youth and adults, controlling or not for family influence and unobserved heterogeneity, and for various forms of social relations. Controlling for a great number of covariates and allowing for non linear and identity-specific family interaction effects, we find that alcohol consumption is a socially enjoyed good.

JEL-Classification: C21, D12, I12, Z13

Key-words: Social relations; Social interaction; Family; Alcohol consumption; Binge drinking

*We are indebted with Giacomo Pasini and Marco Piovesan for the title and for initial encouragement. To Giacomo Pasini we are also grateful for useful suggestions and advices throughout the work. We also thank conference and seminar participants at the First Annual Meeting of the American Association of Wine Economists and at the University of Verona. All responsibility and errors are ours.

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1 Introduction

Alcohol consumption, and especially alcohol abuse, has significant individual and social costs, since it is related to a number of risky or harmful behaviours, ranging from drunken driving to violence, risky sex, lower school and work performance and health diseases.[1] Both drinking and alcohol abuse may increase as a reaction to the lack of significant social relations, for instance to compensate for a sense of loneliness and isolation. In this case, we would say that alcohol is a substitute for social relations. Tragically, systematic abuse may in turn further disrupt an individual's social network, creating a loop from which it is hard to escape, and whose cost is split between the individual and his or her social network. At the same time, alcohol consumption is often a key ingredient of many social moments, from meals to parties, to socially enjoyed leisure. Thus the amount of drinking may be increasing in the number of friends and, more generally, in the richness of an individual's social life. Drinking together may make social interaction more pleasant and in this case we would say that alcohol consumption and social relations are complements.[2]

The first aim of this paper is to investigate whether alcohol consumption and social relations are complements or substitutes, and in particular whether the answer changes for different kinds of alcoholic beverages, for different forms of social relations, for different consumption levels (in particular, use and abuse), and for individuals with different personal and social characteristics. The second aim is to analyse family influence on alcohol consumption, and in particular whether such influence changes for differences in either identity (father, mother and siblings) or consumption level of the other household members.

To identify the effects we are interested in, we control for a great number of individual variables, including demographics, health, habits, education, labour market status and job position, and for characteristics of the social and residential context. We also include a number of controls capturing individual satisfaction with respect to family, friends, leisure, economic situation and previous year comparison. This allows to identify the role of social relations for alcohol consumption on top of differences in unobservables, which are reflected in different satisfaction levels. We further include a number of controls for family composition and, in the case of youths living with their parents, for parental characteristics, so as to make sure that the effects of consumption by other household members are correctly identified.

The main results are the following. First, controlling for all covariates, alcohol consumption is clearly a socially enjoyed good, in the sense that it is positively and significantly correlated to the intensity of social relations. This holds for consumption of wine, beer and spirits, as well as for binge drinking, and it holds for almost any form of social life: friends meeting, going out to shows or to dance, and social and political involvement, all significantly raise

[1] See Dee (1999); DeSimone and Chatterji (2006a,b); Dills and Miron (2003); Duarte and Escario (2006); Grossman and Markowitz (2005); Grossman et al. (2005); Markowitz (2005).

[2] This paper's title refers to the prominent study by Putnam (2000), according to which the Americans appeared to be 'bowling alone', before a revival in their social life.

alcohol use and abuse. The only exceptions are church attendance, which is negatively and significantly related to all forms of alcohol consumption, and youth binge drinking, for which some social life variables turn out to be insignificant. Second, consumption by other household members is positively and significantly correlated to all forms of alcohol consumption, in all specifications of the model. Third, for water consumption the effect of friends is absent and the effect of some forms of social life (including church attendance) is reversed, confirming that our results are specific to alcohol and do not just reflect a general 'thirst' effect. Yet the effect of consumption by other household members is still present for water, suggesting a general mechanism of family drinking habit formation. Last, all the above effects are confirmed even when we only compare individuals who are similar in terms of general propensity to drink alcohol out of meals, yielding a further indication that it is very unlikely that our findings are driven by unobserved heterogeneity.

The remainder of the paper is organised as follows. Section 2 discusses some problems in the estimation of social influence, Section 3 presents the data and our empirical strategy, Section 4 presents results and Section 5 concludes.

2 Estimating social influence

Over the last two decades, more and more attention has been devoted to the estimation of social influence and peer effects in risky behaviours, especially by adolescents and youths. In these studies, scholars have alternatively defined the peer group as the family (Case and Katz, 1991), the neighborhood (Norton et al., 1998) and the school (Gaviria and Raphael, 2001; Lundborg, 2006; Clark and Lohéac, 2007; Kooreman, 2007). Strong social interaction effects are usually found, with important asymmetries in influences within and across gender. A number of papers, notably those by Manski (1993, 2000) describe potential econometric and methodological problems in identifying social interactions. Manski (1993) mainly distinguishes between two types of social interaction effects: i) endogenous effects, whereby individual behaviour is influenced by the prevalent behaviour of others in the group and ii) exogenous effects, whereby individual behaviour is affected by the exogenous characteristics or socioeconomic composition of the reference group.[3] The standard econometric specification of social interaction just includes as regressor the average participation to the considered behaviour by other members of the reference group (excluding the individual).

Many of the existing studies on social interactions and risky behaviours use as a measure for peer behaviour the perceived (by the respondent) rather than the actual peer behaviour (Kawaguchi, 2004; Krauth, 2005, 2007). The use of perceived peer behaviour is problematic since the respondent tends to project his own behaviour on the behaviour of his peers. This may lead to overestimate peer

[3]Manski (1993) also notes that individual and reference group's behaviour might co-jointly move because they are both exposed to some unobserved effect, which creates a statistical correlation (what he calls correlated effects), but has nothing to do with social interaction.

influence. Norton et al. (2003) show that regression estimators are inconsitent when perceived group behaviour is used instead of its correct measure.

Many of the works cited above are related the role of social influences in determining risky behaviours and in particular alcohol or smoking habits, mainly by adolescents and youths. In a vein closer to our approach, DeSimone (2007a,b) estimates the effect of social fraternity and sorority membership on different drinking outcomes and in particular on binge drinking. As we do here, he takes advantage of the richness of the dataset used to control for a large set of proxies for individual preferences in order to account for unobserved heterogeneity. His findings suggests that fraternity and sorority membership are significantly and strongly related to alcohol consumption.

Our approach to the difficulties in estimating social influence is characterised by the following main features. First, we include as regressors both the average behaviour and the exogenous characteristics (e.g. education, job status and position) of the other group members. Second, we have a detailed set of information on parents and siblings. In particular, we consider parents' education, job and drinking. More importantly, information on education, job and drinking behaviour are obtained by parents and siblings themselves. Third, we consider different types of alcohol consumption (wine, beer, spirits and binge drinking) and we use information on the degree of consumption, while the majority of existing papers only study participation. Fourth, differently from almost all of the existing literature, we allow for non-linearities in social pressure by including dummy variables for different degrees of peer group behaviour.[4] Finally, following DeSimone (2007a) we address the unobserved heterogeneity problem by comparing individuals with a similar propensity to consume alcohol out of meals. The combination of all these features allows us to adequately address the above discussed econometric issues.

3 Data and empirical strategy

Our data originate from the 2002 and 2005 waves of the Survey on aspects of daily life run by the Italian national statistical office (ISTAT). The survey collects a wide range of information on alcohol consumption habits, social relations, personal characteristics and family background for a representative sample of 58,445 Italian individuals, aged 15 to 65 and living together with other household members. To investigate whether young people behave differently from the rest of the population, we separately consider the subsample of youths aged 15-30 and living with their parents, which comprises 14,148 individuals. The list and the definition of all variables, together with summary statistics, are presented in Table 7 (full sample) and Table 8 (youth sample) in the Appendix.

[4] A notable exception is Clark and Lohéac (2007).

3.1 Dependent variables and regressors of interest

In our empirical analysis we exploit the following information contained in the surveys. Our dependent variables are *Wine*, *Beer*, *Spirits*, *Water* and *Binge drinking*. The first four reflect ordinal data on consumption of wine, beer, spirits and water, scaled from 1 (no consumption) to 6 (more than one liter per day for wine, beer and water, and more than two shots per day for spirits).[5] *Binge drinking* is a dummy for having exceeded with alcohol at least once in the last year (having consumed more than 6 glasses of any alcoholic drinks at a single time).[6]

Our regressors of interest are measures of social relations/interactions and of consumption by other household members. Among the former variables there is, first of all, the frequency of friends meeting, which may have an important effect on 'drinking together'. If both loneliness and a very rich social life may stimulate alcohol consumption, we might expect a non linear, U-shaped relationship. To allow for it, we include two dummies, one for meeting friends more often than once a week (*Friends*) and one for meeting friends less often than once a month (*No Friends*). The reference category is the excluded dummy, for intermediate frequencies of friends meeting.

Second, we consider two dummies, *Shows* and *Dance*, capturing going to any kind of shows (cinema, theatre, concerts or sports events) and to dance at least three times a year. Third, we have two dummies, capturing active participation, through either time or money, to any kind of political parties, unions or professional associations (*Olson associations*), and to any kind of voluntary, cultural or recreational association (*Putnam associations*). Fourth, we consider a dummy for religious participation (*Church*), capturing going to church at least once a month.

Consumption by other household members may be one of the fundamental drivers of individual alcohol consumption, but possibly with non linear effects, which might also be different according to the identity of different household members. We go beyond the simple consideration of the effects of average consumption by other group members, which is traditionally studied in the literature on peer effects, and try to be as specific as possible.

We tackle possible non-linearities by considering three (drink-specific) dummies, called *25-50%*, *50-75%* and *75-100%*, taking value one if the percentage of other household members who are usual drinkers (or binge drinkers) falls between 25 and 50%, between 50 and 75%, and between 75 and 100%, respectively. The reference category comprises individuals, in whose household less than 25% of other members are usual drinkers (or binge drinkers). Usual drinkers are defined as those who drink at least 1-2 glasses per day in the case of wine, beer and

[5] Intermediate consumption levels are ranked as follows. For wine, beer and water, 2='only seasonally'; 3='only rarely'; 4='1-2 glasses a day'; 5='between 1/2 lt. and 1 lt. per day'. For spirits, 2='exceptionally'; 3='seldom (less than a few shots per week)'; 4='a few shots per week'; 5='1-2 shots per day'. Spirits include super-alcoholic and bitter liquors (Italian *amari*).

[6] Data on *Binge drinking* is only available in 2005. This reduces the full sample and the youth subsample to 26,412 and 6,424 individuals, respectively.

water, and at least a few shots per week in the case of spirits. Binge drinkers are those who binge drunk at least once in the last year.

We tackle the possibility that consumption by different household members has different effects by considering, for the youth subsample, three (drink specific) dummies, called *Father consumer*, *Mother consumer* and *Siblings consumer*, taking value one if the father, the mother or at least a sibling is a usual drinker (or a binge drinker).

As mentioned above, an important feature of our measures of consumption by other household members is that they are not based on perception by the individual considered, but rather constructed on the base of actual consumption declared by each household member. Indeed, regression estimators are inconsitent when perceived measure is used instead of correctly-measure group behaviour (Norton et al., 2003).

3.2 Control variables

Besides consumption by other household members (and indeed to make the coefficients of the above dummies meaningfully interpretable), we always control for family characteristics. For the full sample, we account for the overall number of household members (*Family components*) and for the overall number of children in the household (*Children*). For the youth subsample, we still account for the number of *Family components*, but we also measure the number of each individual's siblings living in the household (*Siblings*); we further include two dummies, *Single parent (father)* and *Single parent (mother)*, for households in which only the father or only the mother is present; and we extensively (and separately) control for the father and the mother's education, employment status and job position.

Differences in alcohol consumption may be due, besides to social life, to other household members' consumption habits and to family characteristics, to a number of other individual or contextual variables. To account for this, we include in our regressions several controls, capturing personal information (age, age squared, sex, marital status, recent mover, health status), education (primary, secondary or college), employment status (employed, unemployed or inactive), job position (eight job variables, which, together with education and, in the case of youths, together with parents' education and job position, proxy for differences in individual and family income), a number of individual habits (smoking, practicing sports, reading books and newspapers, talking of politics), individual satisfaction (with respect to last year comparison, economic situation, health, family, friends and leisure), a set of neighbourhood characteristics (crime, urban blight, association density) and regional and survey year fixed effects.

3.3 Model specification

In our basic analysis, we run ordered probit regressions for wine, beer and spirits consumption. To check that we are not picking up spurious results, we run an

analogous regression for water consumption. To investigate binge drinking, we run a probit regression. We always include all the above listed controls, but only present estimated coefficients for the variables of interest. The effects of controls are discussed in detail in the Appendix.

We analyse three different specifications of the model. In the first one we regress consumption, besides on controls, only on the frequency of friends meeting and on the other measures of social relations/interaction. In the second one, which is our key specification, we add to the regressors consumption by other household members. In the third one, to control for unobserved heterogeneity, we also add to the regressors a dummy for regular alcohol consumption out of meals.

The third specification is motivated by the fact that, notwithstanding our wide array of control variables, we cannot rule out that the correlation we find between alcohol consumption and our variables of interest is not to some degree spurious, in the sense of reflecting some unobserved heterogeneity. One way to address this issue is to include among the regressors some plausible proxy for such unobserved heterogeneity.[7] A good candidate is the propensity to drink alcohol out of meals. If we suspect that the effect of friends is indeed spurious and due to some underlying unobserved characteristic, it is likely that this latter characteristic affects not only consumption of specific alcoholic beverages, but, more broadly, participation to any out of meals drinking. In this case, including the propensity to drink alcohol out of meals in the regression should capture much of the relevant unobserved heterogeneity. In other words, we identify the effects of social relations and of consumption by other household members by comparing individuals who not only have otherwise similar individual and contextual characteristics, but who are also similar in terms of out of meals alcohol drinking.

Specifically, we include among regressors a dummy variable, called *Out of meals*, for the habit of drinking alcohol out of meals at least a few times a week. Notice that this dummy is not drink specific, but rather encompasses any form of alcohol consumption. Moreover, it is not defined in terms of consumption levels, but rather in terms of participation. Yet, it is worth stressing that, rather than making hard claims of exogeneity, we include it to check whether our results of interest are robust.

4 Results: drinking together

We present here the effects of our variables of interest. We first consider the three specifications for the full sample and then investigate whether youths display any difference.

[7] This identification strategy is similar to DeSimone's (2007a) one.

4.1 Effects of friends and social life outside the family

In our first specification, we only introduce social relations and interactions outside home, besides control variables. The first three columns of Table 1 show our first clear evidence of the importance of social life outside the family for 'drinking together'. Specifically, all forms of alcohol consumption (wine, beer and spirits) are positively and significantly correlated with the frequency of friends meeting, with going out to shows and to dance, and with participation to any kind of associations (only the coefficient of *Olson associations* for *Beer* is not significant). The only form of social interaction that is negatively and significantly related to alcohol consumption is going to church, possibly because of religion's emphasis on the virtue of moderation. It is interesting to notice that both the coefficient of *Friends* and that of *No friends* are always significant, with opposite sign. This means that, compared to intermediate frequencies of friends meeting, joining friends more often significantly raises all forms of alcohol consumption and meeting friends less often significantly reduces them. In other words, we find no evidence of a U-shaped relationship between alcohol consumption and friendship, but rather a monotonic relationship.

When we run an analogous regression for water consumption (column 4 of Table 1), we find that it increases with going to shows and to dance, reflecting a 'thirst effect', and decreases with association participation; but, crucially, the coefficients of friends meeting are insignificant for water. Thus the significant monotonic relationship between friends meeting and consumption of wine, beer and spirits truly reflects something specific to drinking alcohol together, rather than a general thirst effect (possibly induced by activities carried out with friends). Moreover, the coefficient of church is reversed in sign (but still significant), so people who attend church do not drink less in general (quite to the contrary), but they specifically drink less alcohol.

Column 5 of Table 1 shows that the effects of friends and social life outside home on binge drinking are analogous to those on wine, beer and spirits consumption. The only difference is that the probability of binge drinking does not significantly rise when passing from meeting friends less often than once a month to at most once a week, but it only significantly rises when passing to frequencies higher than once a week.

4.2 Effects of consumption by other household members

In our second and key specification, we add to the previous regressors the controls for consumption by other household members. The first rows of Table 2 show that all the coefficients of friends and social life outside the family are unaffected in sign, significance and essentially even in magnitude, so the above results are robust. More interestingly, the last rows show the importance of consumption by other household members for individual drinking behaviour. In particular, there is a positive and significant correlation between individual consumption of wine, beer and spirits and consumption of the same beverage by other household members. Interestingly, this positive correlation is also present

for water consumption, so that it might reflect a process of family influence in drinking habits formation, which is not just related to alcohol. Finally, we find a positive and significant effect of binge drinking by other household components on an individual's probability to binge drink, so that the general result holds for binge drinking as well. As we might expect, in all regressions the coefficient is rising in the fraction of other household members that are usual drinkers (or binge drinkers): the higher the fraction of other household members who adopt a certain behaviour, the stronger is their effect on individual adoption of the same behaviour.

4.3 Unobserved heterogeneity?

As mentioned in the previous section, the above results identify significant correlations, but, despite our long list of controls, we cannot entirely rule out the possibility that they are driven by some form of unobserved heterogeneity, correlated, say, with both the propensity to consume alcohol and to meet friends. To rule out this possibility, our third specification adds to the above regressors the dummy for drinking alcohol out of meals at least a few times a week. As shown in the last row of Table 3, its coefficient is positive and significant, as expected. More interestingly, in all regressions the coefficients on consumption by other household members and on going to shows are essentially unaffected; and those on going to dance and to church, as well as those on friends meeting, are reduced in magnitude, but are all confirmed in sign and significance (the only exception is *Friends* in the wine regression, which remains positive but becomes insignificant; yet notice that *No friends* remains significant, and negative, even in that regression). Overall, the conclusion we draw from this exercise is that the the above results are very robust.

4.4 Do youths drink together differently?

Tables 4, 5 and 6 report the relevant coefficients for the sample of young people (aged 15-30 and living with parents), under our three specifications. Starting with wine, beer and spirits (columns 1 to 3), the main results found for the full sample, concerning the effects of friendship, social life and consumption by other household members, are all confirmed in the sample of youths. The main difference is that, for wine and spirits, the frequency of friends meeting loses some of its significance. Specifically, only meeting friends very seldom is significant (and negative) for wine consumption, whereas only meeting them very often is significant (and positive) for spirits consumption. This holds under any specification.

The youth subsample allows us to single out the potentially different effects of living with a father, a mother or at least a sibling who is a usual (drink-specific) consumer (relative to living with a father, a mother or all siblings, respectively, who are not usual drinkers). While all these effects are significant and positive, we may notice that mother's consumption is more influential than father's consumption for wine, whereas for beer and spirits it is the other way

around. This result holds even when controlling for alcohol consumption out of meals, suggesting that it might reflect the disproportionate frequency of wine drinking during meals in Italy and a higher frequency of meals with the mother than with the father. In turn, having at least a sibling who is a regular drinker raises consumption of any alcoholic drinks by more than having either parent who is a usual drinker.

Column 5 of Tables 4, 5 and 6 shows results for binge drinking. Interestingly, going to shows and meeting friends appear to be occasions for binge drinking for the whole sample, but not for youths. In turn, going to dance, participation to any associations and church attendance are all significantly correlated to binge drinking, with exactly the same sign for youths as for the entire population. Living with a father, a mother, or at least a sibling who binge drunk in the last year significantly raises the probability of binge drinking, with the magnitude of the effect increasing in this order. Finally, these results hold irrespective of whether or not we control for alcohol out of meals.

5 Conclusions

Based on a large sample of Italian individuals in 2002 and 2005, we present evidence that alcohol consumption is a socially enjoyed good and that family influence is important for drinking behaviour. More specifically, after controlling for a great number of covariates, as well as for potential unobserved heterogeneity and possible spurious 'thirst' effects, we find that almost any form of social life (from meeting friends to going to shows and to dance, to social and political involvement) significantly raises consumption of any kind of alcoholic beverage (wine, beer and spirits) and even binge drinking. In particular, contrary to the possible expectation of a U-shaped relationship between friendship and drinking, we find a monotonic relationship. A monotonic relationship is also found between individual drinking and drinking intensity by other household members. This general pattern holds both for youths and for the entire population, but, interestingly, youths display a few peculiarities. First, the frequency of friends meeting is not significant for youth binge drinking (whereas other forms of social life, like going dancing, maintain their positive and significant correlation). Second, whereas the father's behaviour has a stronger impact on children's consumption of beer and spirits, as well as on their binge drinking, the mother's behaviour is more important for wine consumption. Moreover, having at least a sibling who is a usual drinker or a binge drinker has a stronger impact on the same behaviour than having either parent who is a usual drinker or a binge drinker. Importantly, these results are not based on individual perception of other household members' behaviour, but rather on their own self reported drinking, appropriately matched.

Appendix: descriptive statistics and effects of controls

Table 7 and Table 8 present summary statistics for all variables, for the full sample and the youth sample, respectively[8]. Here we describe the effects of our control variables for alcohol consumption and binge drinking, in our key specification[9].

5.1 Effects of controls on wine, beer and spirits

The main effects of our controls on wine, beer and spirits consumption for the full population sample are the following. Alcohol consumption significantly increase with age, but at a decreasing rate. Women drink significantly less alcohol than men. Both marriage and health significantly raise all forms of consumption. Education significantly reduces consumption of beer, but not of wine and spirits. Being a recent movers has no significant effect. Although we have no direct information on income, its effects are largely captured by employment status and job position (together with education levels). Not surprisingly, then, these variables play an important role. Individual habits are also significantly correlated with alcohol consumption. In particular, alcohol consumption is positively and significantly correlated with smoking, practicing sports and talking of politics, and negatively with reading books and newspapers. Living in a large family significantly raises consumption of beer and spirits, but not of wine, whereas the number of children in the household is not significantly associated to any form of alcohol consumption. In turn, some characteristics of the social and residential context show a significant correlation, but the general picture is ambiguous. Urban blight raises consumption of wine and spirits, but not of beer. Residing in an area characterised by high crime rates has unclear effects (negative on wine, positive on beer and not significant for spirits).

Since we want to assess whether alcohol consumption is significantly related to participation to certain forms of associational life, it is important to control for the 'supply side' of associational life opportunities. We find that the

[8]The definition of most personal information variables is obvious. We have a dummy for having moved in the last year and one for good health status. Education is captured by dummies for primary, secondary and college degree. We include in regressions the dummies for employed and unemployed and use individuals out of the labour force as reference category. The eight job position dummies capture higher managers, lower managers, white collars, blue collars, entrepreneurs, professionals, self-employed and others. Smoking is captured by the number of cigarettes per day; we have a dummy for usual sport practice, one for reading newspapers at least 3-4 days per week, one for having read any book (unrelated to either school or job) in the last year, and one for talking of politics at least a few times a month. Satisfaction variables are dummies for the respective domain. Crime and urban blight are dummies for criminality risks and for the presence of either dirt, street lightening or pavement condition problems in the residential area. Association density is the number of cultural and recreational associations per 100,000 inhabitants in the region of residence and measures the supply of social participation opportunities.

[9]For the sake of space, coefficients are not presented, but are available from the authors upon request.

density of cultural and recreational associations in the region of residence is significantly related to wine and spirits consumption, positively with the former and negatively with the latter, and is not significant for beer consumption.

To minimise the risk that the correlations we are after are driven by unobserved individual characteristics, we introduce a number of happiness variables. This allows us to capture the effect of social relations net of individual satisfaction for relational life, and the effect of consumption by other household members net of family satisfaction. Moreover, satisfaction for other life domains captures much of the unobserved heterogeneity that might induce individuals to drink more or less. Two clear results emerge. First, not only health status, but also health satisfaction significantly increases alcohol consumption. Second, all forms of alcohol consumption are negatively and significantly related to family satisfaction. In turn, satisfaction for other life domains displays less clear correlations with alcohol consumption.

Turning to the youth subsample, a few differences emerge. Health status and education are not significant anymore (except for some effect of secondary education). Especially in the case of health, this is clearly due to lower sample variance. Smoking and talking of politics maintain a positive and significant correlation with alcohol consumption by youths, whereas the correlation with other individual habits is less clear. Recall that for youths we not only control for the number of family components and of siblings, but also for the mother and the father's education, employment status and job position, and for having only one parent living in the household. A bit surprisingly, the general picture is that most of these family characteristics are not individually significant. Yet it remains important to control for them, in order to reduce omitted variable problems. Social and residential context characteristics are not significant (except for a negative correlation between spirits and both crime and association density). Health satisfaction is not significant anymore (again due to lower variance), whereas the negative and significant correlation between all forms of alcohol consumption and family satisfaction is confirmed.

5.2 Effects of controls on binge drinking

When considering the effects of controls on the probability of binge drinking, many confirmations and a few differences from the above analysis emerge. Age significantly raises the probability of binge drinking (at a decreasing rate) only for youths, whereas it is not significant for the whole sample. Women are significantly less likely to binge drink than men (irrespective of age). Recent movers binge drink with the same probability as the rest of the sample. Health is slightly significant (and positive) only for youths. Education, employment status and job position largely lose their significance (except for some evidence that jobs that are either heavier or more stressful and better paid favour binge drinking). Among individual habits, smoking and talking of politics display a positive and significant correlation with binge drinking as with alcohol consumption, whereas sport practice and reading books are slightly significant (and positive) only for the youth subsample. Most family characteristics are not individually signifi-

cant, apart for some evidence that youths living with a single parent are more likely to binge drink than those living with both parents. Urban blight and crime are significant for the whole sample, but not for youths, whereas association density is not significant for either sample. Finally, binge drinking is negatively and significantly related to family satisfaction, whereas satisfaction for other aspects of life is less significant.

References

Case, A. C. and L. F. Katz (1991). The company you keep: The effects of family and neighborhood on disadvantaged youths. *NBER Working Paper 3705*.

Clark, A. E. and Y. Lohéac (2007). "It wasn't me, it was them!" Social influence in risky behavior by adolescents. *Journal of Health Economics 26*(4), 763–784.

Dee, T. S. (1999). State alcohol policies, teen drinking and traffic fatalities. *Journal of Public Economics 72*(2), 289–315.

DeSimone, J. (2007a). Fraternity membership and binge drinking. *Journal of Health Economics 26*(5), 950–967.

DeSimone, J. (2007b). Fraternity membership and drinking behavior. *NBER Working Paper 13262*.

DeSimone, J. S. and P. Chatterji (2006a). Adolescent drinking and high school dropout. *NBER Working Paper 11337*.

DeSimone, J. S. and P. Chatterji (2006b). High school alcohol use and young adult labor market outcomes. *NBER Working Paper 12529*.

Dills, A. K. and J. Miron (2003). Alcohol prohibition and cirrhosis. *American Law and Economics Review 6*(2), 285–318.

Duarte, R. and J. J. Escario (2006). Alcohol consumption and truancy among spanish adolescents: a count-data approach. *Economics of Education Review 25*(2), 179–187.

Gaviria, A. and S. Raphael (2001). School-based peer effects and juvenile behavior. *Review of Economics and Statistics 83*(2), 257–268.

Grossman, M., R. Kaestner, and S. Markowitz (2005). An investigation of the effects of alcohol consumption and alcohol policies on youth risky sexual behaviors. *American Economic Review 95*(2), 263–266.

Grossman, M. and S. Markowitz (2005). I did what last night? Adolescent risky sexual behaviors and substance abuse. *Eastern Economic Journal 31*(1), 383–405.

Kawaguchi, D. (2004). Peer effects on substance use among American teenagers. *Journal of Population Economics 17*(2), 351–367.

Kooreman, P. (2007). Time, money, peers, and parents; some data and theories on teenage behavior. *Journal of Population Economics 20*(1), 9–33.

Krauth, B. V. (2005). Peer effects and selection effects on smoking among Canadian youth. *Canadian Journal of Economics 38*(3), 735–757.

Krauth, B. V. (2007). Peer and selection effects on youth smoking in California. *Journal of Business and Economic Statistics 25*(3), 288–298.

Lundborg, P. (2006). Having the wrong friends? Peer effects in adolescent substance use. *Journal of Health Economics 25*(2), 214–233.

Manski, C. F. (1993). Indentification of endogenous social effects: The reflection problem. *Review of Economic Studies 60*(3), 531–542.

Manski, C. F. (2000). Economic analysis of social interactions. *Journal of Economic Perspectives 14*(3), 115–136.

Markowitz, S. (2005). Alcohol, drugs and violent crime. *International Review of Law and Economics 25*(1), 20–44.

Norton, E. C., R. C. Lindrooth, and S. T. Ennett (1998). Controlling for the endogeneity of peer substance use on adolescent alcohol and tobacco use. *Health Economics 7*(5), 439–453.

Norton, E. C., R. C. Lindrooth, and S. T. Ennett (2003). How measures of perception from survey data lead to inconsistent regression results: Evidence from adolescent and peer substance use. *Health Economics 12*(2), 139–148.

Putnam, R. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.

Table 1: Effects of friends and social life outside the family (full sample)

	(1)	(2)	(3)	(4)	(5)
	Wine	**Beer**	**Spirits**	**Water**	**Binge**
Friends	0.039	0.053	0.068	0.010	0.143
	[0.011]***	[0.012]***	[0.012]***	[0.012]	[0.028]***
No Friends	-0.076	-0.066	-0.104	0.000	-0.077
	[0.020]***	[0.021]***	[0.022]***	[0.020]	[0.051]
Shows	0.039	0.144	0.181	0.086	0.136
	[0.012]***	[0.012]***	[0.013]***	[0.012]***	[0.028]***
Dance	0.130	0.196	0.366	0.055	0.365
	[0.014]***	[0.014]***	[0.015]***	[0.014]***	[0.031]***
Olson assoc.	0.048	0.001	0.078	-0.024	0.135
	[0.013]***	[0.013]	[0.014]***	[0.013]*	[0.030]***
Putnam assoc.	0.098	0.085	0.140	-0.030	0.180
	[0.012]***	[0.012]***	[0.013]***	[0.012]**	[0.027]***
Church	-0.067	-0.153	-0.130	0.027	-0.244
	[0.011]***	[0.011]***	[0.012]***	[0.011]**	[0.026]***
Observations	58,445	58,445	58,445	58,445	26,412

Notes: We run ordered probit regressions for consumption of *Wine*, *Beer*, *Water* and *Spirits*; and a probit regression for *Binge* drinking. Robust standard errors, clustered by household, are reported in parentheses. ***, ** and * indicate coefficient significance at the 1%, 5% and 10% levels, respectively. All regressions include regional dummies, survey year fixed effects and the set of controls presented in Table 7, with the exception of *Out of meals* and of the dummies for consumption by the other household members (0-25%, 25-50%, 50-75% and 75-100%). The base category for the friendship variables is the intermediate frequency of friends meeting (*Friends medium*).

Table 2: Social life and consumption by other household members (full sample)

	(1)	(2)	(3)	(4)	(5)
	Wine	**Beer**	**Spirits**	**Water**	**Binge**
Friends	0.040	0.052	0.068	0.013	0.146
	[0.011]***	[0.012]***	[0.012]***	[0.011]	[0.028]***
No Friends	-0.078	-0.065	-0.100	0.007	-0.077
	[0.020]***	[0.021]***	[0.022]***	[0.019]	[0.052]
Shows	0.041	0.146	0.182	0.078	0.113
	[0.012]***	[0.012]***	[0.013]***	[0.012]***	[0.028]***
Dance	0.132	0.199	0.365	0.053	0.361
	[0.014]***	[0.014]***	[0.015]***	[0.014]***	[0.030]***
Olson assoc.	0.047	0.002	0.074	-0.012	0.130
	[0.013]***	[0.013]	[0.014]***	[0.013]	[0.030]***
Putnam assoc.	0.097	0.085	0.139	-0.022	0.167
	[0.012]***	[0.012]***	[0.013]***	[0.012]*	[0.027]***
Church	-0.071	-0.152	-0.131	0.028	-0.232
	[0.011]***	[0.011]***	[0.012]***	[0.011]***	[0.025]***
25%-50%	0.223	0.355	0.293	0.628	0.509
	[0.016]***	[0.036]***	[0.026]***	[0.036]***	[0.049]***
50%-75%	0.246	0.380	0.413	0.749	0.854
	[0.034]***	[0.159]**	[0.106]***	[0.030]***	[0.115]***
75%-100%	0.549	0.696	0.553	1.320	0.978
	[0.040]***	[0.104]***	[0.063]***	[0.026]***	[0.062]***
Observations	58,445	58,445	58,445	58,445	26,412

Notes: We run ordered probit regressions for consumption of *Wine*, *Beer*, *Water* and *Spirits*; and a probit regression for *Binge* drinking. Robust standard errors, clustered by household, are reported in parentheses. ***, ** and * indicate coefficient significance at the 1%, 5% and 10% levels, respectively. All regressions include regional dummies, survey year fixed effects and the set of controls presented in Table 7, with the exception of *Out of meals*. The base category for the friendship variables is the intermediate frequency of friends meeting (*Friends medium*). The base category for consumption by the other household members is *0-25%*, a dummy equal to 1 if the percentage of other household members lies between 0% and 25%.

Table 3: Controlling for unobserved heterogeneity (full sample)

	(1)	(2)	(3)	(4)	(5)
	Wine	**Beer**	**Spirits**	**Water**	**Binge**
Friends	0.013	0.024	0.028	0.015	0.081
	[0.011]	[0.012]**	[0.012]**	[0.011]	[0.029]***
No Friends	-0.067	-0.052	-0.082	0.006	-0.051
	[0.020]***	[0.021]**	[0.022]***	[0.019]	[0.052]
Shows	0.039	0.147	0.186	0.078	0.115
	[0.012]***	[0.012]***	[0.013]***	[0.012]***	[0.029]***
Dance	0.075	0.147	0.299	0.057	0.289
	[0.014]***	[0.014]***	[0.015]***	[0.014]***	[0.031]***
Olson assoc.	0.037	-0.010	0.062	-0.011	0.123
	[0.013]***	[0.013]	[0.014]***	[0.013]	[0.031]***
Putnam assoc.	0.086	0.073	0.123	-0.021	0.155
	[0.012]***	[0.012]***	[0.013]***	[0.012]*	[0.028]***
Church	-0.055	-0.138	-0.110	0.027	-0.204
	[0.011]***	[0.011]***	[0.012]***	[0.011]**	[0.026]***
25%-50%	0.224	0.345	0.267	0.628	0.478
	[0.016]***	[0.036]***	[0.026]***	[0.036]***	[0.050]***
50%-75%	0.238	0.372	0.384	0.749	0.813
	[0.034]***	[0.155]**	[0.105]***	[0.030]***	[0.112]***
50%-75%	0.550	0.709	0.517	1.320	0.981
	[0.040]***	[0.104]***	[0.063]***	[0.026]***	[0.063]***
Out of meals	0.722	0.732	1.002	-0.058	0.958
	[0.015]***	[0.017]***	[0.018]***	[0.017]***	[0.032]***
Observations	58,445	58,445	58,445	58,445	26,412

Notes: We run ordered probit regressions for consumption of *Wine*, *Beer*, *Water* and *Spirits*; and a probit regression for *Binge* drinking. Robust standard errors, clustered by household, are reported in parentheses. ***, ** and * indicate coefficient significance at the 1%, 5% and 10% levels, respectively. All regressions include regional dummies, survey year fixed effects and the set of controls presented in Table 7. The base category for the friendship variables is the intermediate frequency of friends meeting (*Friends medium*). The base category for consumption by the other household members is *0-25%*, a dummy equal to 1 if the percentage of other household members lies between 0% and 25%.

Table 4: Effects of friends and social life outside the family (youth sample)

	(1)	(2)	(3)	(4)	(5)
	Wine	**Beer**	**Spirits**	**Water**	**Binge**
Friends	0.040	0.110	0.152	0.027	0.091
	[0.034]	[0.032]***	[0.034]***	[0.030]	[0.072]
No Friends	-0.260	-0.222	-0.074	0.019	-0.254
	[0.117]**	[0.107]**	[0.124]	[0.098]	[0.283]
Shows	0.052	0.144	0.172	0.139	0.052
	[0.033]	[0.031]***	[0.034]***	[0.029]***	[0.067]
Dance	0.139	0.265	0.384	0.028	0.388
	[0.023]***	[0.022]***	[0.023]***	[0.021]	[0.047]***
Olson assoc.	0.122	0.075	0.127	0.007	0.168
	[0.031]***	[0.031]**	[0.032]***	[0.031]	[0.061]***
Putnam assoc.	0.173	0.179	0.221	-0.004	0.271
	[0.025]***	[0.025]***	[0.025]***	[0.023]	[0.049]***
Chruch	-0.124	-0.210	-0.190	0.049	-0.282
	[0.023]***	[0.022]***	[0.024]***	[0.021]**	[0.049]***
Observations	14,148	14,148	14,148	14,148	6,424

Notes: We run ordered probit regressions for consumption of *Wine*, *Beer*, *Water* and *Spirits*; and a probit regression for *Binge* drinking. Robust standard errors, clustered by household, are reported in parentheses. ***, ** and * indicate coefficient significance at the 1%, 5% and 10% levels, respectively. All regressions include regional dummies, survey year fixed effects and the set of controls presented in Table 8, with the exception of *Out of meals* and of the dummies for consumption by the other household members (*Father consumer*, *Mother consumer* and *Siblings consumer*). The base category for the friendship variables is the intermediate frequency of friends meeting (*Friends medium*).

Table 5: Social life and consumption by other household members (youths)

	(1)	(2)	(3)	(4)	(5)
	Wine	**Beer**	**Spirits**	**Water**	**Binge**
Friends	0.037	0.109	0.148	0.023	0.106
	[0.034]	[0.032]***	[0.033]***	[0.030]	[0.073]
No Friends	-0.262	-0.221	-0.080	-0.038	-0.279
	[0.117]**	[0.106]**	[0.125]	[0.099]	[0.264]
Shows	0.051	0.145	0.181	0.120	0.030
	[0.033]	[0.031]***	[0.034]***	[0.028]***	[0.068]
Dance	0.142	0.263	0.379	0.035	0.400
	[0.023]***	[0.022]***	[0.023]***	[0.021]*	[0.047]***
Olson assoc.	0.113	0.075	0.122	0.020	0.154
	[0.031]***	[0.031]**	[0.032]***	[0.031]	[0.062]**
Putnam assoc.	0.179	0.173	0.218	-0.001	0.242
	[0.025]***	[0.024]***	[0.025]***	[0.024]	[0.050]***
Church	-0.127	-0.205	-0.191	0.040	-0.255
	[0.023]***	[0.022]***	[0.024]***	[0.021]*	[0.049]***
Father consumer	0.062	0.223	0.189	0.355	0.415
	[0.024]***	[0.041]***	[0.030]***	[0.033]***	[0.055]***
Mother consumer	0.176	0.125	0.143	0.481	0.603
	[0.031]***	[0.084]	[0.071]**	[0.035]***	[0.132]***
Siblings consumer	0.339	0.291	0.334	0.417	0.715
	[0.051]***	[0.058]***	[0.045]***	[0.031]***	[0.078]***
Observations	14,148	14,148	14,148	14,148	6,424

Notes: We run ordered probit regressions for consumption of *Wine*, *Beer*, *Water* and *Spirits*; and a probit regression for *Binge* drinking. Robust standard errors, clustered by household, are reported in parentheses. ***, ** and * indicate coefficient significance at the 1%, 5% and 10% levels, respectively. All regressions include regional dummies, survey year fixed effects and the set of controls presented in Table 8, with the exception of *Out of meals*. The base category for the friendship variables is the intermediate frequency of friends meeting (*Friends medium*).

Table 6: Controlling for unobserved heterogeneity (youths)

	(1)	(2)	(3)	(4)	(5)
	Wine	**Beer**	**Spirits**	**Water**	**Binge**
Friends	-0.005	0.064	0.086	0.023	0.022
	[0.033]	[0.032]**	[0.034]**	[0.030]	[0.076]
No Friends	-0.267	-0.225	-0.072	-0.038	-0.171
	[0.115]**	[0.104]**	[0.122]	[0.099]	[0.260]
Shows	0.064	0.164	0.213	0.120	0.061
	[0.033]*	[0.031]***	[0.034]***	[0.028]***	[0.071]
Dance	0.080	0.201	0.301	0.036	0.301
	[0.023]***	[0.022]***	[0.023]***	[0.021]*	[0.049]***
Olson assoc.	0.091	0.044	0.091	0.021	0.149
	[0.032]***	[0.031]	[0.033]***	[0.031]	[0.065]**
Putnam assoc.	0.151	0.142	0.180	-0.001	0.200
	[0.025]***	[0.025]***	[0.025]***	[0.024]	[0.052]***
Church	-0.103	-0.185	-0.160	0.040	-0.227
	[0.023]***	[0.022]***	[0.024]***	[0.021]*	[0.050]***
Father consumer	0.058	0.235	0.180	0.355	0.415
	[0.024]**	[0.041]***	[0.030]***	[0.033]***	[0.057]***
Mother consumer	0.175	0.123	0.116	0.481	0.638
	[0.031]***	[0.086]	[0.070]*	[0.035]***	[0.135]***
Siblings consumer	0.335	0.254	0.239	0.417	0.665
	[0.052]***	[0.056]***	[0.043]***	[0.031]***	[0.080]***
Out of meals	0.717	0.873	1.149	-0.004	1.033
	[0.028]***	[0.027]***	[0.032]***	[0.029]	[0.056]***
Observations	14,148	14,148	14,148	14,148	6,424

Notes: We run ordered probit regressions for consumption of *Wine*, *Beer*, *Water* and *Spirits*; and a probit regression for *Binge* drinking. Robust standard errors, clustere by household, are reported in parentheses. ***, ** and * indicate coefficient significance at the 1%, 5% and 10% levels, respectively. All regressions include regional dummies, survey year fixed effects and the set of controls presented in Table 8. The base category for the friendship variables is the intermediate frequency of friends meeting (*Friends medium*).

Table 7: Descriptive Statistics for the full sample

Variable	**Obs**	**Mean**	**Std.Dev.**	**Min**	**Max**
Wine	58,445	2.187	1.176	1	6
Beer	58,445	1.808	0.869	1	6
Spirits	58,445	1.672	0.935	1	6
Water	58,445	4.214	1.494	1	6
Binge drinking	26,412	0.111	0.315	0	1
Out of meals	58,445	0.086	0.281	0	1
0-25% (wine)	58,445	0.746	0.435	0	1
25-50% (wine)	58,445	0.190	0.392	0	1
50-75% (wine)	58,445	0.036	0.187	0	1
75-100% (wine)	58,445	0.028	0.165	0	1
0-25% (beer)	58,445	0.959	0.199	0	1
25-50% (beer)	58,445	0.034	0.181	0	1
50-75% (beer)	58,445	0.002	0.050	0	1
75-100% (beer)	58,445	0.005	0.068	0	1
0-25% (spirits)	58,445	0.922	0.269	0	1
25-50% (spirits)	58,445	0.065	0.246	0	1
50-75% (spirits)	58,445	0.005	0.072	0	1
75-100% (spirits)	58,445	0.008	0.089	0	1
0-25% (water)	58,445	0.100	0.300	0	1
25-50% (water)	58,445	0.138	0.345	0	1
50-75% (water)	58,445	0.151	0.358	0	1
75-100% (water)	58,445	0.611	0.488	0	1
0-25% (binge)	26,412	0.833	0.373	0	1
25-50% (binge)	26,412	0.102	0.303	0	1
50-75% (binge)	26,412	0.015	0.122	0	1
75-100% (binge)	26,412	0.050	0.218	0	1
Friends (high)	58,445	0.545	0.498	0	1
Friends (medium)	58,445	0.365	0.481	0	1
No friends	58,445	0.090	0.286	0	1
Shows	58,445	0.521	0.499	0	1
Dance	58,445	0.188	0.390	0	1
Olson associations	58,445	0.187	0.390	0	1
Putnam associations	58,445	0.291	0.454	0	1
Church	58,445	0.487	0.499	0	1
Crime	58,445	0.256	0.436	0	1
Urban blight	58,445	0.347	0.476	0	1
Association density	58,445	36.39	13.47	16.2	68.6
Recent mover	58,445	0.039	0.194	0	1
Age	58,445	39.82	13.98	15	65
Sex (female)	58,445	0.509	0.499	0	1
Marital status (married)	58,445	0.613	0.487	0	1

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Table 7 – continued from previous page

Variable	Obs	Mean	Std.Dev.	Min	Max
Health status	58,445	0.968	0.176	0	1
Cigarettes	58,445	3.481	7.282	0	99
Sport	58,445	0.331	0.470	0	1
Newspapers	58,445	0.376	0.484	0	1
Books	58,445	0.457	0.498	0	1
Talking of politics	58,445	0.539	0.498	0	1
Family components	58,445	3.546	1.108	2	11
Children	58,445	1.488	0.991	0	8
Prev. year comparison	58,445	0.505	0.499	0	1
Economic satisfaction	58,445	0.565	0.496	0	1
Health satisfaction	58,445	0.887	0.316	0	1
Family satisfaction	58,445	0.948	0.223	0	1
Friends satisfaction	58,445	0.887	0.316	0	1
Leisure satisfaction	58,445	0.647	0.478	0	1
No schooling	58,445	0.015	0.121	0	1
Primary education	58,445	0.517	0.499	0	1
Secondary education	58,445	0.205	0.404	0	1
College education	58,445	0.088	0.283	0	1
Employed	58,445	0.548	0.498	0	1
Unemployed	58,445	0.070	0.255	0	1
Inactive	58,445	0.382	0.486	0	1
Higher manager	58,445	0.014	0.118	0	1
Lower manager	58,445	0.030	0.169	0	1
White collar	58,445	0.233	0.423	0	1
Blue collar	58,445	0.276	0.447	0	1
Entrepreneur	58,445	0.022	0.148	0	1
Professional	58,445	0.030	0.172	0	1
Self-employed	58,445	0.094	0.292	0	1
Others	58,445	0.033	0.177	0	1

Table 8: Descriptive Statistics for the youth sample

Variable	**Obs**	**Mean**	**Std.Dev.**	**Min**	**Max**
Wine	14,148	1.695	0.945	1	6
Beer	14,148	1.840	0.889	1	6
Spirits	14,148	1.699	0.968	1	6
Water	14,148	4.301	1.433	1	6
Binge drinking	6,424	0.163	0.370	0	1
Out of meals	14,148	0.126	0.332	0	1
Father wine consumer	14,148	0.472	0.499	0	1
Mother wine consumer	14,148	0.174	0.379	0	1
Siblings wine consumer	14,148	0.070	0.255	0	1
Father beer consumer	14,148	0.076	0.264	0	1
Mother beer consumer	14,148	0.017	0.128	0	1
Siblings beer consumer	14,148	0.049	0.216	0	1
Father spirits consumer	14,148	0.156	0.363	0	1
Mother spirits consumer	14,148	0.023	0.150	0	1
Siblings spirits consumer	14,148	0.082	0.274	0	1
Father water consumer	14,148	0.795	0.404	0	1
Mother water consumer	14,148	0.838	0.368	0	1
Siblings water consumer	14,148	0.614	0.487	0	1
Father binge drinker	6,424	0.105	0.306	0	1
Mother binge drinker	6,424	0.019	0.136	0	1
Siblings binge drinker	6,424	0.083	0.275	0	1
Friends (high)	14,148	0.870	0.336	0	1
Friends (medium)	14,148	0.117	0.321	0	1
No Friends	14,148	0.013	0.114	0	1
Single parent (mother)	14,148	0.105	0.307	0	1
Single parent (father)	14,148	0.023	0.150	0	1
Shows	14,148	0.826	0.379	0	1
Dance	14,148	0.486	0.500	0	1
Olson associations	14,148	0.117	0.322	0	1
Putnam associations	14,148	0.277	0.448	0	1
Church	14,148	0.413	0.492	0	1
Crime	14,148	0.261	0.439	0	1
Urban blight	14,148	0.358	0.479	0	1
Association density	14,148	35.35	13.27	16.3	68.6
Recent mover	14,148	0.029	0.168	0	1
Age	14,148	21.91	4.42	15	30
Sex	14,148	0.467	0.499	0	1
Health status	14,148	0.991	0.096	0	1
Cigarettes	14,148	2.596	5.641	0	95
Sport	14,148	0.557	0.497	0	1
Newspapers	14,148	0.317	0.465	0	1

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Table 8 – continued from previous page

Variable	Obs	Mean	Std.Dev.	Min	Max
Books	14,148	0.564	0.496	0	1
Talking of politics	14,148	0.502	0.500	0	1
Family components	14,148	4.000	1.034	2	11
Siblings	14,148	1.252	1.087	0	6
Prev. year comparison	14,148	0.518	0.500	0	1
Economic satisfaction	14,148	0.557	0.497	0	1
Health satisfaction	14,148	0.946	0.226	0	1
Family satisfaction	14,148	0.948	0.222	0	1
Friends satisfaction	14,148	0.937	0.243	0	1
Leisure satisfaction	14,148	0.775	0.417	0	1
Primary education	14,148	0.440	0.496	0	1
Secondary education	14,148	0.275	0.446	0	1
College education	14,148	0.067	0.251	0	1
Employed	14,148	0.350	0.477	0	1
Unemployed	14,148	0.147	0.354	0	1
Inactive	14,148	0.503	0.500	0	1
Father education	14,148	0.323	0.468	0	1
Mother education	14,148	0.326	0.469	0	1
Father employed	14,148	0.756	0.429	0	1
Father unemployed	14,148	0.043	0.203	0	1
Mother employed	14,148	0.530	0.499	0	1
Mother unemployed	14,148	0.041	0.197	0	1
Father white collar	14,148	0.046	0.209	0	1
Father executive	14,148	0.136	0.343	0	1
Father office worker	14,148	0.378	0.485	0	1
Father blue collar	14,148	0.463	0.499	0	1
Father other occupation	14,148	0.302	0.459	0	1
Mother white collar	14,148	0.017	0.129	0	1
Mother executive	14,148	0.046	0.209	0	1
Mother office worker	14,148	0.379	0.485	0	1
Mother blue collar	14,148	0.328	0.470	0	1
Mother other occupation	14,148	0.200	0.400	0	1