

CAUSES OF ALCOHOL CONSUMPTION IN ADOLESCENCE

Univ. Prof. Dr. Reinhold Bergler

Institute of Psychology, University of Bonn

I. Introduction

Alcohol is not a subject which has been invented by present-day health politics but a topic which has always attended mankind throughout its entire history, in culture, in the religions, in medicine as well as in psychology. Even Martin Luther lamented that the "perpetual thirst" - as he called it - would plague Germany right up to The Last Judgement.

In sociology Bales (1946) presented a classification of the cultures from the aspect of their alcohol acceptance; he differentiated between

- m abstinence cultures (any alcohol consumption is forbidden, e.g. in Islamic or Buddhist countries),
- m ambivalence cultures (there are various valuation patterns existing parallel but excluding one another with regard to the consumption of alcohol: Great Britain, the USA and Canada),
- m permissive cultures (consumption of alcohol is accepted but drunkenness and alcoholism are rejected: the Mediterranean countries),
- m permissive, dysfunctional cultures (not only "normal" consumption of alcohol is accepted, but also alcohol excesses are accepted: quite a few Eastern European or South American countries).

Alcohol continues to be an extremely topical subject for discussion in our society today; it can be positioned between enjoyment and risk, between damnation and euphoria, between well-being and self-destruction. In the course of history the most diverse strategies have been applied to regulate, liberalize, control, sanction or even to ban the influence of alcohol. In the end all these attempts have not been able to eliminate alcohol as a source of pleasure and as a problem. It seems only politicians and sometimes also teachers and doctors think that it is possible to prevent the abuse of alcohol by state control as well as with bans on advertising. The miscarriage of alcohol prohibition in the United States shows all too clearly that it is not possible to direct deeply seated psychological and cultural facts onto a path prescribed by Puritan ideals.

Also the young people we interviewed - irrespective of whether they drink alcohol or not - expressed the conviction in about 70 percent of all cases, that a general ban on alcohol would have no influence on the consumption of alcohol.

All this does not alter the fact that alcohol - and of course alcoholism - is a subject which everybody naturally wants to have a say about and relate their convictions, explanation concepts as well as suggestions for "therapies". It was William Shakespeare who put it so appropriately:

"If everybody only spoke when they had something to say, people would very quickly lose their language ability".

But now to our research subject:

II. Task and state of research

The current discussion on the health policy triggered off our study entitled:

"Causes of Alcohol Consumption in Adolescence". Here we set ourselves the following tasks:

- (1) What conditions influence young people's alcohol consumption and how strong is their influence?
- (2) What theoretical case model could sufficiently explain young people's alcohol consumption?
- (3) What role does alcohol advertising play in the network of conditions relating to young people's alcohol consumption?

The starting point for our research was a systematic and critical analysis of the relevant scientific literature. The results of our search and reflection are summarized as follows:

1. In Germany there has been a considerable decline in readiness to consume alcohol; this is also true of young people; e.g. the per capita consumption of beer dropped from 142 litres in 1992 to 131 litres in 1997 and finally to 127.4 litres in 1998.

In the case of 88.4 percent of the population (initial value 80 million people in the FRG) there is an unproblematic alcohol consumption.

2. No generally binding and generally accepted limited values are laid down, as to which patterns of alcohol consumption are judged as harmless or dangerous. We were therefore forced to define tolerance values specific to age and sex by reverting to the literature available and taking expert opinions into consideration (Table 1).

Table 1. Average daily adolescent alcohol consumption (in g distilled alcohol)

Categories of drinking behaviour based on tolerance values specific to age and sex				
n=1000		12-13 years old	14-15 years old	16-17 years old
BOYS	non-drinkers	0	0	0
	occasional drinkers	< 0.5	< 8	< 16
	regular drinkers	³ 0.5	³ 8	³ 16
GIRLS	non-drinkers	0	0	0
	occasional drinkers	< 0.25	< 5	< 11
	regular drinkers	³ 0.25	³ 5	³ 11

3. The scientific value of the majority of all studies is minimized on the one hand by the lack of scientific theories to explain and predict the consumption of alcohol - for the most part implicit, naive behaviour theories prevail - and on the other hand due to the more or less voluntary and a-empirical selection of variables from which it is assumed that they have an influence on the development of alcohol consumption; the data obtained in this way was then correlated and later interpreted and analyzed causally.

Example: the extent of ties with a clique is correlated with the drinking status.

4. As determinants for the consumption of alcohol in adolescence, up to now the following have been researched elementaristically and not within the framework of a complex explanation model:

Sociodemographic characteristics:	sex, education, age, initial alcohol consumption
Cultural characteristics:	e.g. conditions under which Turks in Germany drink alcohol
Quality of the parent-child relationship:	child-rearing behaviour, consumer behaviour, conflicts, quality of ties, value orientation, expectations
Group relationships:	friends, peers, clubs and the related pattern of alcohol consumption practised
Personality and behaviour characteristics:	self-esteem, self-confidence, feelings of inferiority, loneliness, depression, resignation, aggressiveness
Achievement orientation in school and training:	achievement motivation, relationship with teachers, conflicts
Perception of information and processing information:	health education, knowledge of advertisements, attitude towards advertising, advertising bans, marketing bans

5. Time and time again the subject "Alcohol Consumption in Adolescence" has always been seen and interpreted - and rightly so - from the aspect of developmental psychology. The perspective of this discussion should be seen in view of the following considerations:

(1) Adolescence is a process of confrontation with diverse tasks of development and demands on development; one is no longer a child but not yet an adult: a positive role definition is lacking; a permanent conflict of roles is the consequence.

(2) Particularly from the parents, many unclear, differing and even contradictory expectations on behaviour are expressed to the young people.

(3) The consumption of alcohol is given a coping-strategy function for solving problems in conflict areas specific to young people.

6. Demographic characteristics (education, social class) have no sufficient explanatory value at all for juvenile alcohol consumption; at least to some extent there is agreement on this in the literature.

7. There is also relative agreement regarding two facts on behaviour:

- The age when they begin to drink alcohol is between 10 and 11; though in many cases the first contact with alcohol is earlier on.

- Regular alcohol consumption is established when they are between 14 and 18 years old.

8. In the political discussion on health the topic of alcohol advertising and the consumption of alcohol are never-ending subjects for discussion within the European Community too. Within the framework of naive everyday theories

on the effects of advertising there seems to be no doubt that advertising for alcohol has a direct influence on the consumption of alcohol.

This issue is also becoming very topical in scientific literature. Now - conflicting with widespread public opinion - the most diverse methodological approaches do not at all lead up to the findings that comply with the prevailing general opinion. The published opinion cannot by any means be regarded as a validation for naively assumed effects. Mark Twain is known to have written these lines in our autograph album for us all: "Whenever we share the opinion of the majority it is time to have second thoughts". Even our research group has thought it over and consequently has once again taken into account the factor - effects of advertising and consumption of alcohol - in their theoretical approach.

Now if you take the present state of research in view of the most diverse methodical approaches then the following picture appears relating to the subject - effects of advertising:

(1) Econometrical studies:

Owing to the findings available the effect of advertising on the amount of alcohol sold can generally be ignored: Advertising is always brand advertising.

(2) Questionnaire studies:

They are limited to correlation analyses between differing variables, e.g. finding correlations between the consumption of alcohol and the interest in and knowledge of the advertisements; an analysis carried out under causal aspects is lacking.

(3) Experimental studies:

Influences of advertising on the consumption of alcohol could not be proved.

(4) Longitudinal studies:

The few studies available do not diagnose a link between the perception of advertisements and the consumption of alcohol.

(5) Correlation analyses: bans on advertising and consumption of alcohol.

Up to now it could not be proved that advertisements for alcohol have a significant influence on the per capita consumption of alcohol.

III. The basic study of the Institute of Psychology, University of Bonn

By way of introduction it can be said that the limited time available only allows for a very short presentation of the findings obtained. Here we should like to refer to the book which will appear in the next few months, containing a detailed documentation of the literature, the theory, the method as well as the results in detail.

Even the definition of tasks in the study clearly shows that it was our endeavour to carry out a complex analysis of juvenile alcohol consumption based on a formulated theory and taking into consideration all the groups of variables accounted for in the literature.

Therefore the theoretical explanation model takes the following constructs into account:

- consumption of alcohol
- balance of alcohol
- social orientation: parents, siblings, peers, clubs

- achievement orientation: school/work, sport, self-image
- pleasure orientation: desires for experiences, leisure-time behaviour, enjoyment profile
- recollection of advertising, self-image - advertising image: self-experiencing in connection with alcohol - experiencing advertising.

The demographic representative random sample comprises altogether 997 young people aged between 12 and 17; as far as sex is concerned there is equal distribution. A specific weighting had to be made with regard to the drinking status. As the study is centrally concerned with the conditions for the onset of juvenile alcohol consumption, it had to be guaranteed that a statistically adequate number of alcohol drinkers were included in our random sample, i.e. although of course the distribution of non-drinkers, occasional drinkers and regular drinkers of alcohol in our random sample clearly differs from their actual distribution in the overall population. However it must also be pointed out that the actual distribution of the three different groups is not known at all with regard to their drinking habits. However, this was irrelevant for our questioning, as we were specifically concerned with the conditions for the onset of adolescent alcohol consumption and here the non-drinkers, who are doubtless in the majority in this age-group, only functioned as a control group.

The data was evaluated in two stages:

- (1) Analysis of the correlations and interdependencies
- (2) Analysis of the causal dependencies

1. Analysis of the correlations and interdependencies

Based on the empirically developed scales and questionnaires, first of all the constructs of the theoretical explanation model were operationalised and then possible connections were investigated in detail between the drinking status and the alcohol balance, the alcohol advertising as well as the social achievement and pleasure orientation.

1.1 Consumption of alcohol

The group comparison of adolescents who drink alcohol regularly, occasionally or none at all, produced the results summarized as follows:

- (1) The first consumption of alcohol is mainly connected with social gatherings in the presence of parents and frequently takes place before the end of their tenth year. However, regular drinkers show a tendency to drink alcohol at an early age together with friends.
- (2) Compared with the first cigarette the first drink of alcohol is full of positively felt effects (tipsy) except for the majority of non-drinkers. These positive initial experiences - in many cases under supervision of the parents - undoubtedly have an influence on how further consumer behaviour develops.
- (3) The primary incentive to drink alcohol is determined by feelings of curiosity, drinking and enjoying the company of friends, positive self-affirmation (adventure and overcoming risks), as well as overcoming boredom. Advertising as a positive stimulant can be practically ruled out.
- (4) As far as occasional drinkers are concerned, the development of further drinking behaviour is largely connected with social occasions; in the case of regular drinkers the consumption of alcohol is seen at an early age as a means of overcoming problems

(conflicts, stress, loneliness). Non-drinkers judge the consumption of alcohol as foolish and not very pleasurable.

(5) Occasional increased alcohol consumption is also seen as a solution for problems in adolescence; conditions which trigger off the consumption of alcohol can be:

- a desire to feel grown-up
- expecting positive stimulation and overcoming resignation and depressive moods
- a chance to resolve and reduce inhibitions, fears and feelings of loneliness.

(6) The consumption of alcohol increasingly becomes an essential element of their own personal life-style and quality of life: it then conveys feelings of independence, self-confidence and social attractiveness.

(7) In Germany the proportion of young people who drink alcohol is definitely overestimated by adolescent drinkers. In addition to this they consider themselves partly at risk for becoming addicted to alcohol.

(8) Instruction about alcohol at school - as far as there is any at all - only arouses the interest of non-drinkers. Adolescents who drink alcohol see it as unrealistic and boring; moral appeals meet with their disapproval.

1.2 Alcohol balance

First of all the costs and benefits of drinking alcohol known to young people were obtained in the explorative pilot study. The representative item pool comprises 31 benefits and 25 cost factors. Data reduction through factor analyses produces four dimensions respectively, on which the diverse benefits and cost aspects can be positioned. The dimensions of the benefits seen in drinking alcohol are:

Factor I: pleasure, relaxation, social aspects

Factor II: overcoming problems, fleeing from reality, disinhibiting

Factor III: cool, grown-up self-portrayal

Factor IV: eating habits and life-style

The dimensions of the costs seen in drinking alcohol are:

Factor I: loss of self-esteem, wrong behaviour, loss of control

Factor II: conflicts, risks

Factor III: detrimental effects on health, addiction

Factor IV: constitutional impairment without solving problems

The following summarized findings are decisive for explaining the consumption of alcohol:

1. The potential costs of drinking alcohol are known to all young people. However, there is only for non-drinkers a considerable subjective likelihood that they will occur. The results confirm the great learning success of the various educational measures relating to health: the results also prove that knowledge is an inadequate precondition for behaviour which is in keeping with this knowledge, i.e. naive theories on the effects of advertising are disproved everyday due to the considerable discrepancies between health knowledge and health behaviour.
2. Young people, who drink alcohol, experience the potential advantages of consuming alcohol more strongly, more differentiated and with subjectively greater likelihood that they will occur than non-drinkers do.
3. The quality of weighing in the balance the advantages and disadvantages of drinking alcohol - and this is a decisive finding - is significantly linked with the drinking status of the young people. With growing

consumption of alcohol their own personal balance increases in the positive range. In comparison the costs of alcohol consumption are predominant for non-drinkers. Even when asking if the personal balance has a direct effect on their drinking behaviour, i.e. is basically the main cause of it - this will be expounded later on - the results clearly show that only when the psychological balance is considerably influenced by the likelihood that there could be negative effects from drinking alcohol, is it at all possible to control the consumption of alcohol or abstain from it. The advantages of drinking alcohol only clearly predominate for occasional drinkers and regular drinkers; in the case of occasional drinkers the highest value (69%) is linked with an equalized balance, i.e. the advantages and disadvantages are balanced out; solely in the case of non-drinkers do the disadvantages of drinking alcohol predominate.

Certainly all young people know about the multitude of potential costs and benefits connected with drinking alcohol. In the endopsychic processing of these positive or negative patterns of experience and judgment, due to the influence of a series of determinants, such as the parent-child relationship - it then comes to all factors being subjectively weighed up from the point of view of how likely it is that they themselves will be directly affected by the advantages or disadvantages of drinking alcohol. The more the balance is in the positive range, then the more likely it is that the consumption of alcohol will become an everyday matter of course and that potential control barriers will be increasingly broken down.

It is a matter of their own alcohol balance, how one individual deals with the alcohol they are offered. Therefore alcohol prevention must bring a considerable influence to bear on developing a balance and on the concrete factors it comprises, which make it possible to weigh up how to overcome risks. However the development of this balance must begin in childhood; it is

decisively influenced by the example given by the parents. To put the emphasis here solely on the disadvantages of drinking alcohol is bound to be counterproductive as this cannot be communicated.

1.3 Social orientation: Quality of the parent-child relationship

The parental home is at the centre of the primary socialisation: The parents have a direct or indirect influence on the development of children's patterns of behaviour and judgment in manifold ways. The atmosphere, the situative framework conditions and the styles of behaviour - also from the aspect of educational discussions - have a lasting effect on a young person's development. At the same time the quality of the parent-child relationship also has a considerable influence on how the quality and intensity of ties with friends, cliques and their behaviour patterns develop.

Already a first exemplary survey clearly shows links between the consumption of alcohol and specific patterns of attitude between the young people and their parents (Table 2).

Table 2. Parent-child-relationship

Parent-child relationship as a percentage n=546 top boxes (score 6 and 7)				
	non- drinkers	regular drinkers	sig.	cc eta ²
I often argue with my parents	3	17	0.00	0.29
I do a lot of things with my parents	26	6	0.00	0.37
I can really talk well with my parents	38	16	0.00	0.28
My parents frequently quarrel	5	12	0.00	0.23

According to these findings young people who do not drink alcohol describe their parents extremely positively: The parents are always sympathetic partners to converse with; they can talk about everything with them; arguments between the adolescents and their parents take a problem-solving course. In addition to this there are quite a lot of mutual activities, i.e. they experience a lot of common pleasures with their parents.

Contrary to this the young people who regularly drink alcohol frequently come into conflict with their parents and are also quite often exposed to conflicts between their parents: family tensions become a sort of continual problem; then adolescents inevitably develop problem-solving strategies; the consumption of alcohol is one of these possibilities.

Now children and young people can experience their relationship to their parents from four aspects:

Factor I: being treated like a child, overprotection, discrepancy in the standards

Factor II: relationship based on partnership, mutuality and openness

Factor III: parents undergoing problems and conflicts, neglecting their children

Factor IV: generosity and acceptance

As young people differ in their individual judgment patterns on these dimensions, different types of the parent-child relationship can be diagnosed by cluster analyses and then be described more precisely due to their respective, specific consumer behaviour.

The first survey already clearly shows that the varying quality of the parent-child relationships is linked with a quite specific drinking behaviour (Table 3).

Table 3. Quality of the parent-child relationship and alcohol consumption

Adolescent drinking behaviour				
as a percentage				
n=997				
		non- drinkers n=300	occasional drinkers n=451	regular drinkers n=246
Type I	relative indifference, deficits in talking to one another	21 %	<u>51 %</u>	27 %
Type II	the family as a system of relationships full of conflicts. Anti-familial outward orientation	19 %	43 %	<u>38 %</u>
Type III	understanding but overprotection	29 %	<u>52 %</u>	19 %
Type IV	security, partnership and friendly attachment	<u>44 %</u>	40 %	16 %
Type V	attachment, acceptance but marked control	<u>40 %</u>	38 %	22 %

In the case of Type II there is undoubtedly a manifold disrupted parent-child relationship; at the same time alcohol is consumed in 38 percent of cases. How the psychology of young people belonging to this type looks, can be outlined - with the aid of further research data - as follows:

Type II: At risk for alcoholism and critical parent-child relationship:
Behaviour and experiencing qualities

Contentment with life:

low values for contentment with life

Achievement orientation:

under-developed achievement motivation

unimportance of success at school and at work

frequently breaking off schooling or occupational training

Leisure-time behaviour:

"roaming around the area with the clique"

Self-image:

negative self-image: aggressive, risk-oriented

Alcohol consumption:

as a stimulant and to overcome problems

to reduce pessimism about the future

to overcome boredom and loneliness

Tried drugs: 26 percent

The results of the group comparisons of adolescents who regularly, occasionally drink alcohol and those who do not drink at all, show extremely significant results with regard to hypotheses; the main results can be noted as follows:

The regular consumption of alcohol by young people is positively linked with

- a parent-child relationship marked by tensions, conflicts, bans and little readiness to talk to one another
- the alcohol consumption of their relevant social member and reference groups: parents, siblings, peers and friends or acquaintances at the sports club. The parents' alcohol consumption quite often exceeds the limits of tolerable alcohol consumption (Table 4).

Table 4. Drinking behaviour of the social environment

Drinking behaviour of the social environment (persons, who generally drink alcohol) as a percentage					
	non- drinkers n=300	occasional drinkers n=451	regular drinkers n=246	sig.	cc eta ²
sports club (n=290)	39	67	76	0.00	0.29
peers (n=997)	37	97	97	0.00	0.60
parents (n=997)	100	100	100	n.s.	
older siblings	49	83	81	0.00	0.32

The regular consumption of alcohol by adolescents is positively linked with

- processes of distancing themselves from parents and an increased attachment and ties with the clique and to their many friends who largely drink alcohol. The behavioural influence of the social reference persons and groups outside the parental home has a stronger effect than that of

the parents: The clique being a catalyst for modifying behaviour especially in the sphere of consumer behaviour.

- Young people who drink alcohol increasingly establish themselves in cliques as well as in circles of friends, who accept and regularly drink alcohol. (Tables 5 & 6)
- The occasional drinkers clearly differ in their motivation for drinking alcohol from the regular alcohol-consuming adolescents; for the majority of all occasional drinkers psychologically their drinking status is not a passing one on the way to becoming regular drinkers. Alcohol is mainly linked with pleasure and not with strategies of solving their own personal problems.

The available results of the study clearly show that: occasional drinkers - always in comparison with regular drinkers -

- experience fewer conflicts in their families and at school
- are less fixed on the clique and less dependent on it
- show considerably lesser tendency to become problem drinkers
- consume alcohol in moderation mainly in a convivial atmosphere, which is linked up with a lot of pleasantness as well as manifold pleasurable aspects
- are more performance oriented
- are altogether more aware of risks
- take a broadly more critical attitude towards alcohol advertising.

Table 5. Acceptance of alcohol consumption by friends

What do your friends think about your drinking alcohol?					
as a percentage n=997					
	non- drinkers n=300	occasional drinkers n=451	regular drinkers n=246	sig.	eta ² cc
quite good	11	43	55		
not quite so good	46	5	5		
it varies a lot	43	52	40		

Table 6. Alcohol consumption in circle of friends

Alcohol consumption in circle of friends					
as a percentage n=997					
	non- drinkers n=300	occasional drinkers n=451	regular drinkers n=246	sig.	eta ² cc
almost always	0	9	17	0.00	0.60
quite often	10	63	70		
rarely	27	25	1		
never	63	3	3		

1.4 Achievement orientation

Young people differ according to the extent of their achievement orientation and achievement motivation; they do so on the basis of three dimensions of judgment:

Factor I: Extent of achievement motivation and cooperation with teachers and superiors

Factor II: Extent of aversion towards school

Factor III: Extent of social acceptance or rejection in class

The drinking status of young people is now positively linked with their own personal achievement orientation and achievement motivation; some exemplary results clearly show the differences between adolescents who do not drink alcohol and those who drink regularly (Table 7):

Table 7. Achievement orientation of adolescents

The achievement orientation of schoolchildren as a percentage n=517 top boxes (score 6 and 7)				
	non- drinkers n=296	regular drinkers n=221	sig.	eta ² cc
I actually quite like going to school	38	12	0.00	0.31
I often have problems with the teachers	7	16	0.00	0.31
All in all my teachers are actually quite nice	39	18	0.00	0.26
I should be glad if I had already finished with school	18	33	0.00	0.22
I like learning	19	8	0.00	0.24
More often than not our lessons are rather boring	14	32	0.00	0.24

When carrying out a typological analysis - cluster analysis - the result is an even more differentiated picture of the correlations. To illustrate this only the two extreme types are characterized in further detail:

Type I: Deficit in achievement orientation with simultaneous high consumption of alcohol:

Specific characterization:

- severe dissatisfaction with school
- deficit in learning motivation
- boredom predominates

- antipathy towards teachers and conflicts with teachers
- school seen as a necessary evil
- unimportance of success at school
- self-rating as a poor scholar
- high proportion of occasional and regular consumers of alcohol
- consumption of alcohol at school

Type II: High achievement orientation with simultaneous low consumption of alcohol

Specific characterization:

- enjoys school and lessons
- judges the teachers very likeable
- enjoys school
- great personal importance of success at school
- self-rating as a good scholar
- no alcohol or only occasional consumption of alcohol
- no consumption of alcohol at school

When taking all the available data into account the overall findings can be summarized as follows:

The consumption of alcohol by young people goes up with increasing

- conflicts at school
- antipathy values towards school
- unwillingness to learn
- unimportance of good academic achievement

1.5 Pleasure orientation

The pleasure orientation of young people shows diverse aspects of experiencing and diverse patterns of orientation and therefore also individual preferences. For basic dimensions of juvenile pleasure orientation the following could be found:

- Factor I: general leisure-time orientation
- Factor II: consumption of pleasure-giving luxuries and sex
- Factor III: family orientation and love of nature
- Factor IV: enjoying food and holidays
- Factor V: enjoying risks: experiencing limits
- Factor VI: achievement orientation in sport
- Factor VII: passive leisure-time enjoyment: T.V., lazing about

For the majority of all young people pleasure is a main element of their own personal quality of life; the intensity of their desire increases with age; regular consumers of alcohol constantly emphasize how much importance they attach to experiencing pleasure (Table 8).

Table 8. Importance of enjoyment

How important is enjoyment in your life? as a percentage n=997					
	non- drinkers n=300	occasional drinkers n=451	regular drinkers n=246	sig.	eta ² cc
very important/ important	83	93	100	0.00	0.15
not very important/ not at all important	17	7	10		

In the very diverse pleasure-giving activities experiencing pleasure and risks is seen however in each specific form respectively. Taking the consumption of alcohol here as an example: experiencing pleasure when drinking alcohol prevails over the known risk factors - this is definitely found to a highly-developed degree in juvenile consumers of alcohol, i.e. the awareness of risks declines with the increased consumption of alcohol (Table 9).

Table 9. Perceived risk of alcohol (comparison of consumer groups)

Is alcohol something more dangerous or something more to be enjoyed? as a percentage n=997					
	non- drinkers n=300	occasional drinkers n=451	regular drinkers n=246	sig.	eta ² cc
something more dangerous	88	23	15	0.00	0.54
something more to be enjoyed	12	77	85		

Also in this connection definite influences of age can certainly be seen (Table 10):

Table 10. Perceived risk of alcohol (comparison of age groups)

Is alcohol something more dangerous or something more to be enjoyed? as a percentage n=997					
	12-13 years old n=260	14-15 years old n=300	16-17 years old n=440	sig.	eta ² cc
something more dangerous	69	38	25	0.00	0.34
something more to be enjoyed	31	62	75		

However young people do differ significantly according to the respective spheres of enjoyment they individually prefer.

The cluster analysis makes it possible to diagnose four pleasure-seeking types:

Type I (18%): Enjoyment is linked with holiday experiences, good food, sweets, T.V. and a harmonious family life. A rather introverted life-style develops: 65% of young people do not drink alcohol.

Type II (36%): Variety of balanced leisure-time interests: sports oriented to family, nature and achievement. Risk-taking behaviour is rejected: 50 percent of the mainly 16 to 17 year-old females are occasional drinkers; drinking alcohol is strictly controlled.

Type III (28%): High orientation to pleasure-giving luxuries and willingness to take risks in their spare time (e.g. driving fast on motor-scooters): The lure of forbidden fruits: 57 percent of young people are occasional drinkers of alcohol, 35 percent drink alcohol regularly.

Type IV (18%): Relaxing interests determine their experience of pleasure: enjoying holidays, listening to music, sleeping late as well as eating: 30 percent non-drinkers; 39 percent occasional and 31% regular drinkers of alcohol. Higher affinity to spirits and cigarettes. This type can be found in all age-groups - in boys as well as girls.

1.6 Effects of advertising

The present study has also mainly been concerned with the potential effects of advertising in connection with the onset of juvenile alcohol consumption. In scientific literature a series of indicators for the effectiveness of advertising has been discussed over and over again. Yet the question concerning the direction of its effect has not been accounted for at all when formulating the hypothesis, i.e. it is more or less assumed that there can only be one direction in which it is effective, i.e. the direction from advertising to the consumption of alcohol.

Our study has taken four different methodical approaches into account to analyze the effect of advertising:

- knowledge of advertising
- the relation between self-image and advertising image
- the action experienced in the advertisements for alcohol and own personal consumption of alcohol
- attitude to alcohol advertisements

1.6.1 Knowledge of advertising

In a multitude of studies the knowledge about concrete advertising for alcohol, i.e. memory values, is mentioned time and time again as a valid indicator for the

effectiveness of advertising. In this respect it is assumed that knowledge of advertising is a result of the intensive pressurized effect of advertising: young people who are impressed by the alcohol advertising will - and this is the naive assumption - also be influenced accordingly. Because this hypothesis is extremely topical in the discussion, it has been given a central place at the outset to our study.

The main results can be noted as follows:

- (1) Background advertising for alcohol, advertising in magazines, radio and cinema, on billboards and sportswear is known to about 25% of the young people.
- (2) 83% of young people recall alcohol advertising on television; 55% mention the advertising spots for alcohol during the breaks in sport programmes on television.
- (3) A young person recalls on an average less than five different brand advertisements.
- (4) The number of advertisements for alcohol they recall, i.e. knowledge of advertising, is mainly linked with the age of the young people and not with their drinking behaviour. Apparent links between their drinking status and their knowledge of advertising only occur if their ages are not taken into consideration.

1.6.2 The relation between self-image and advertising image

Young people always develop quite a specific image of themselves i.e. they develop a self-image, which is reflected in specifically developed degrees of specific personality and behaviour characteristics. However adolescents not only have a picture of themselves but they are also able to describe the actors in the

alcohol advertising psychologically. Research proceeded methodically so that the characteristics of their own self-image and "advertising image" ascertained empirically could be measured with the help of an attitude scale. Then there was not only an individual psychogram with regard to themselves but also one for the people who appeared in the advertisements. In everyday understanding only the hypothesis has always been stated that when the attractiveness of the advertising image increases compared with the self-image, there is a greater likelihood that alcohol consumption begins. The reverse hypothesis that with growing alcohol consumption in adolescence the attractiveness of the advertising image compared with the self-image increases therefore becoming a kind of personal ideal, has not been formulated at all.

The main results can be noted as follows:

- (1) The drinking status has no influence on the advertising image, i.e. the image of people shown in alcohol advertising is stereotype and is irrespective of age.
- (2) The self-image differs in non-drinkers compared with drinkers in individual characteristics such as social adaptedness, health awareness, being reasonable, ambitious, family-oriented.

Since the psychological profile, as it is reflected in the advertising image, shows no differences between non-drinkers, occasional and regular drinkers, those differences which have now arisen are mainly based on the self-image and therefore on the adolescents' understanding of them-selves. From the results available self-image and advertising image largely correspond with each other accordingly where about half of the young people are concerned, but it is interesting that the self-assessment of the adolescents who drink alcohol is

comparatively unfavourable (Table 11).

Table 11. Self-image and advertising image

Difference between self-image and advertising image as a percentage n=997					
	non- drinkers n=300	occasional drinkers n=451	regular drinkers n=246	sig.	eta ² cc
advertising image more positive than self-image	15	23	38	0.00	0.25
advertising image = self-image	42	49	46		
advertising image more negative than self-image	43	28	16		

Another important finding is that the link between drinking status and differences between self-image and advertising image continually decreases the older the young people are. As far as 16 to 17 year-olds are concerned there is ultimately no connection between the two variables.

The reasons for the differences shown between the advertising image and the self-image of the young people are therefore mainly due to age and are therefore based on the adolescent development. Consequently there is no explanation value for the possible effectiveness of advertising. As the advertising image is generally a stereotype which is not specifically linked with the drinking status of the young person and besides as the differences between advertising image and self-image decrease more and more in the process of development irrespective of the drinking status, this self-concept theory can no longer be upheld to explain the effectiveness of advertising.

1.6.3 General appraisal of advertising for alcohol

When the juveniles appraise advertising for alcohol they do it on four dimensions; here the juveniles differ according to what extent they themselves agree with these patterns of attitude:

- Factor I: alcohol advertising as attractive entertainment and informative stimulation
- Factor II: affective aversion to advertising and accepting bans on advertising
- Factor III: alcohol advertising as manipulation
- Factor IV: ineffectiveness of bans on advertising

The main results can be noted as follows:

- (1) The sympathetic appraisal of alcohol advertising is polarized between the young people: 46% make a positive assessment, 54% make a less positive assessment.
- (2) The description of alcohol advertising made by juvenile occasional and regular drinkers is significantly more positive than that of non-drinkers: young people who do not drink alcohol also find the advertising for alcohol disagreeable in 84% of cases.
- (3) The "alcohol" consumer behaviour leads to the formation of positive attitudes towards advertising for alcohol. Attitude and evaluation patterns are also frequently the result of a specific behaviour, i.e. young people who drink alcohol develop specific attitude patterns with regard to the alcohol advertising. The consumer motivation itself - and this will be shown later - is based on other factors relating to personality and social environment.

1.6.4 The action experienced in the advertisements for alcohol and their own consumption of alcohol

Young people develop quite specific patterns of ideas and experiences in connection with the advertising for alcohol: The scenes they perceive in the alcohol advertising. On the other hand however, even in view of their own personal experiences, they link quite specific feelings, associations, experiences and situations with their own consumption of alcohol. Both aspects of perception were taken into consideration in the study. Three basic results are possible here:

- (1) the experience qualities conveyed by advertising are more positive than their own personal experiences.
- (2) The experience qualities conveyed by advertising correspond to those of their own experiences.
- (3) The experience qualities conveyed by advertising are more negative than their own personal experiences.

The world of experiences in advertising can be described on the basis of five dimensions:

- | | |
|-------------|--|
| Factor I: | fun, activity, relaxation, communication |
| Factor II: | health and information |
| Factor III: | love, sex |
| Factor IV: | attractive illusory worlds |
| Factor V: | exaggeration |

Now young people differ according to the extent of the various illusory contents, associations and qualities of experiencing which they link with the alcohol advertising. However, juveniles also differ in which experiences and feelings are

associated for them themselves with the consumption of alcohol. Both questions have been answered in the present study.

The main results can be noted as follows:

(1) When their own consumption of alcohol increases, the illusory worlds of advertising draw closer and closer to their own personal states of experience and feelings in connection with the consumption of alcohol, i.e. the alcohol advertising increasingly gains in importance and in attracting the attention of the regular drinkers of alcohol among young people (Table 12).

Table 12. Advertising world of experience and own alcohol experiences

Difference between their own experiences with alcohol and the advertising message they perceive.					
as a percentage					
n=997					
	non- drinkers n=300	occasional drinkers n=451	regular drinkers n=246	sig.	eta ² cc
advertising message more positive than own experiences	49	44	38	0.02	0.11
advertising message = own experiences	44	48	57		
advertising message more negative than own experiences	7	8	5		

(2) For 49 percent of the non-drinkers of alcohol the "advertising messages" do not correspond with their own experiences and expectations: Although the illusory worlds of advertising are experienced considerably more positively than their own experiences, the non-drinkers continue to reject the consumption of alcohol.

1.6.5 Marketing and advertising bans in the sphere of alcohol

The majority of juveniles regard with scepticism the restrictions - which are constantly being called for - relating to the sale of alcohol in shops right up to a general ban on alcohol as well as banning alcohol advertising; understandably here young people who do not drink alcohol differ from those who regularly drink alcohol.

If we combine the answers to the various questions of those who do not believe in restrictive measures, i.e. those who reject them, then the following picture appears (Table 13):

Table 13. Kind of advertising bans rejected

Kind of bans rejected as a percentage n=997					
	non- drinkers n=300	occasional drinkers n=451	regular drinkers n=246	sig.	cc eta2
no alcohol to be sold to juveniles under 16	55	70	82	0.00	0.21
advertising bans are futile	49	70	69	0.00	0.25
general ban on alcohol will not result in reducing alcoholism	70	64	72	n.s.	
advertising bans will not affect own drinking behaviour	69	69	62	0.00	0.17

A specific analysis of the attitude of young people to advertising bans results in the findings summarized as follows:

- (1) The relatively strongest support for bans on advertising can of course be found on the part of the young people who do not drink alcohol.
- (2) Irrespective of the extent they support bans on advertising, practically all young people express considerable doubts on the aim and object of such advertising bans. Except for a number of non-drinkers the young people develop considerable scepticism regarding the success of such a measure.
- (3) The age of the young people does not have any influence on this judgment pattern relating to bans on advertising.
- (4) The decisive finding is that they practically deny that advertising bans would influence their own drinking status.

The effectiveness of prohibitive measures such as restricting the alcohol offered to adolescents, reducing the opportunities for purchasing alcohol and putting bans on advertising for alcohol are viewed very sceptically by young people. The majority of all young people, irrespective of whether or not they drink alcohol themselves is convinced that the prohibition will have no influence on the amount of alcohol consumed.

2. Causal analysis - Checking the theoretical model with LISREL

In analyzing the data individual features from the theoretical model - e.g. the quality of relationship to parents or the achievement orientation - have up to now always been thoroughly investigated for their correlation with juvenile drinking behaviour. Statements on the *relative* strength of these correlations with the drinking behaviour could not yet be made up to now. The question as to which of the conditional factors has the strongest and which has the least influence could therefore not yet be answered. Even the *causal* direction of the correlations found still remains unsettled: does the drinking behaviour - as postulated in the theoretical model - influence the effect of the alcohol advertising or does the alcohol advertising influence the drinking behaviour of young people?

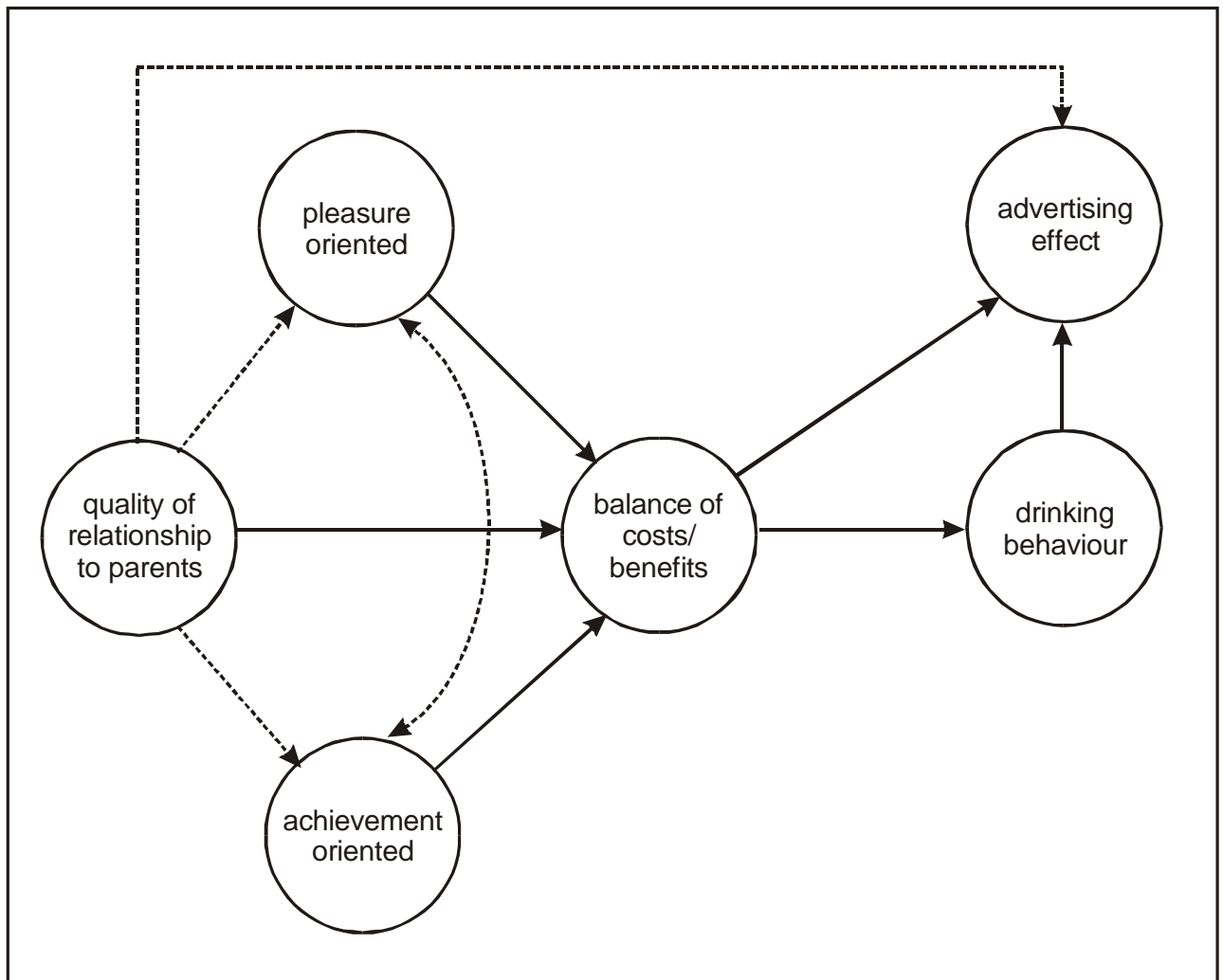


Diagram 1: Theoretical model on the causes for juvenile consumption of alcohol

From the results of the study it has now become quite clear that all the characteristics taken into consideration in the theoretical model - seen on their own - are linked with the alcohol balance and the drinking behaviour. In a further step in the statistical analysis all assumptions concerning the links between characteristics with their causal direction and relative distinctness have now been tested *simultaneously*. This kind of "overall testing" to see how the theoretical model fits in with empirical data can be made by using the structurally equivalent LISREL model (Jöreskog & Sörbom, 1988). The aim of the LISREL analysis is to confirm or refute postulated causal correlations

between variables with empirically ascertained correlations.

In the theoretical model not all the effective correlations have been completely specified. Based on relevant research results some of the correlations are regarded as proven, e.g. the effect of the alcohol balance on drinking behaviour - on the model they are shown as arrows with unbroken lines. Other effective correlations cannot be postulated so definitely yet - e.g. the influence of the relationship with parents on the effectiveness of advertising - these arrows are therefore shown as dotted lines. Therefore half of the random sample is tested first of all, predefining which of the theoretically permitted correlations between the characteristics can be well matched with the data. The model thus optimized is then tested with the data from the second half of the random sample and here too must show a satisfactory match. ("Kreuzvalidierung (cross-validation)"; Rudinger, 1988). If a match is also obtained with the second half of the random sample, then the assumptions - contained in the model - on the causes for adolescent alcohol consumption can be regarded as proven.

In testing causal effective correlations between variables with LISREL it must however be guaranteed, that the effective direction of an arrow is not wherever you want to put it. The arrow from drinking behaviour to the effectiveness of advertising may not just go back in the same direction. A model in which this arrow goes in the opposite direction, must therefore show a much poorer match, if the assumption regarding the postulated direction of the arrow is to be supported (refer to MacCallum, Wegener, Uchino & Fabrigar, 1993). If the causal factors for drinking alcohol are discussed with young people then there are varying opinions regarding the effective direction of the arrows for drinking behaviour and alcohol balance on the effectiveness of advertising. The

alternative hypothesis here is that the advertising for alcohol above all determines drinking behaviour and alcohol balance and not the other way round. Therefore this model which contradicts our theoretical assumptions was tested - under otherwise the same conditions - in order to demonstrate that the assumptions regarding the effect of alcohol advertising on drinking behaviour cannot be maintained against the background of a strict empirical investigation.

The complete LISREL model with structural model and measuring variables is shown in the following diagram:

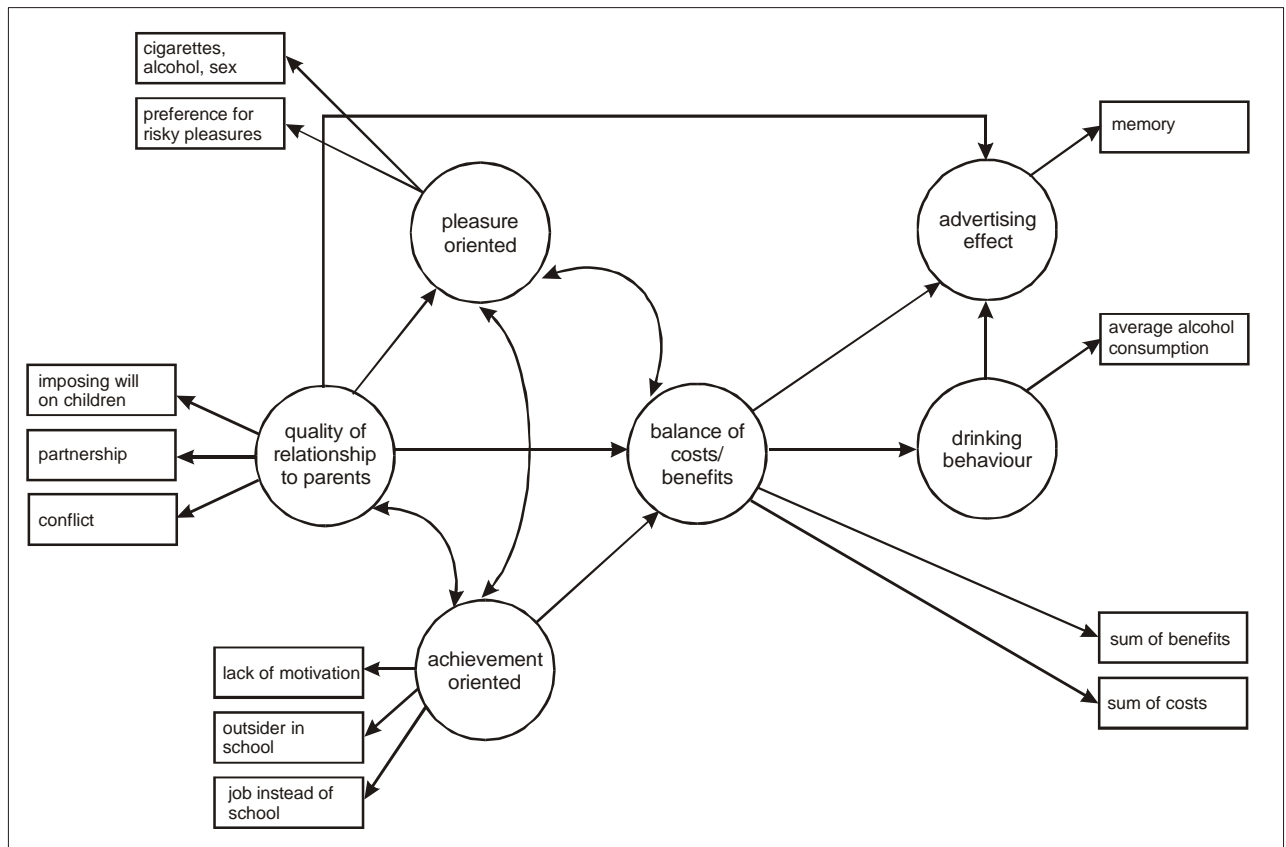


Diagram 2: The complete LISREL model with structural model and measuring variables

And now to the results - Overall findings:

Altogether the postulated LISREL model matches the empirical data well:

χ^2 (df=43) = 90.69; GFI = .98; AGFI = .96; RMR = .05. The model is clearly identified, all parameters are valid and the main ones are significant. Cross-validation of the model with the second half of the random sample produces a somewhat poorer but still quite satisfactory match: χ^2 (df=43) = 167.62; GFI = .96; AGFI = .93; RMR = .07.

The LISREL model, in which - contrary to our theoretical assumptions - the arrows, the drinking behaviour and the alcohol balance are determined by the

effect of advertising, does not achieve any acceptable match. The reference numbers deteriorate dramatically: χ^2 (df=44) = 540.04; GFI = .88; AGFI = .79; RMR = .14.

These overall findings support the theoretical model shown in Diagram 1.

Owing to these results an alternative model, in which the alcohol advertising influences the drinking behaviour and the alcohol balance, must be rejected.

Differential diagnosis:

On the strength of the LISREL model the following effective correlations have been sufficiently proven empirically:

- (1) The drinking behaviour of young people is decisively determined by the alcohol balance.
With an increase in the subjective likelihood that advantages will occur in drinking alcohol compared with the likelihood that there will be disadvantages, the average consumption of alcohol by young people increases.
- (2) The alcohol balance is constantly influenced by the pleasure and achievement orientation. If on the one hand risk-taking, pleasure-seeking behaviour is preferred (cigarettes, sex, thrills, forbidden fruits), then the advantages in drinking alcohol are classified more likely than the disadvantages. On the other hand a positive alcohol balance encourages a preference for risky pleasure-seeking behaviour.
- (3) An explanation model, in which it was postulated that advertising had a direct influence on the drinking behaviour and the alcohol balance, had to be discarded.
Consequently the assumption can be upheld, that the drinking behaviour and the alcohol balance determine the effect of advertising - and not the

other way round - that the effect of alcohol advertising determines the drinking behaviour and the balance.

- (4) The effect of alcohol advertising is mainly based on the alcohol balance, own drinking behaviour and the quality of the relationship with the parents: consumption of alcohol determines perception and processing of the advertisements.

All the more alcohol advertising is remembered, when

- there is a greater likelihood that there will be advantages in drinking alcohol compared with the disadvantages that are perceived.
- the higher the average consumption of alcohol is
- the stronger the relationship with the parents is determined by being treated like a child and by conflicts and the less this relationship is experienced as a partnership.

- (5) The quality of the parent-child relationship is the most influential factor in the explanation model; it interacts with the achievement orientation and influences the experience of pleasure and the alcohol balance. A relationship with the parents based on trust and partnership encourages a positive appraisal of school and academic targets. However, when achievement orientation exists this also promotes a relationship with the parents which is based on partnership.

The quality of the relationship with the parents also influences the young people's pleasure-seeking experiences. If the relationship with the parents is marked by conflicts and by them being treated as children, then the adolescents tend to prefer risk-taking pleasures linked with thrills and forbidden fruits.

- (6) The alcohol balance is greatly influenced by the achievement orientation of the young people, it is determined to a lesser extent by the quality of the relationship with the parents.

For young people the advantages of drinking alcohol are more likely than the disadvantages,

- when school and progress at school is judged negatively, the relationship with the teachers is judged badly and when they derive little pleasure in academic achievement.

- when the relationship with the parents is marked more by being treated like a child and by familial conflicts than by a relationship based on trust and partnership.

- (7) Pleasure-seeking experiences and achievement orientation interact with one another. A preference for risk-taking, pleasure-seeking behaviour encourages a negative attitude to school, teachers and academic targets. However, a poorly developed achievement orientation in turn also encourages a preference for experiencing thrills and forbidden fruits.

IV. Prospects

As the terms "appropriate alcohol consumption", "consumption of alcohol" and "alcohol abuse" play a central role in the public debate, it should be pointed out that: even the beginning of alcohol consumption by juveniles - and sometimes even by children - always takes place in a special cultural and social environment. Therefore it is essential that these framework conditions be included in health politics in particular.

It must also be differentiated between tobacco and alcohol consumption: there is no appropriate tobacco consumption. The detriment to health is undisputed so the aim of prevention is quite clear: to prevent and put an end to smoking. It is different in the case of alcohol as there is an appropriate and quite healthy alcohol consumption with definite pleasurable quality. Alcohol consumption is a question of the health tolerance values and this means of pleasure is an integral part of a socially attractive and communicative lifestyle in our culture

(compare Turkey - Islam).

According to the criteria of the World Health Organization about 90 percent of all consumers of alcohol have a harmless use of this product group. In view of this the question is whether and to what extent the 10 percent, who show an improper use of alcohol, can be reached at all via general preventive measures such as advertising bans, distribution restrictions or tax increases.

Under certain situative framework conditions alcohol is indisputably a high-risk health factor. "Sobriety levels" must be guaranteed in driving a vehicle, at work, during pregnancy as well as in connection with taking certain medicines.

A diagnosis of the psychological reasons for adolescents beginning to drink alcohol and for alcohol abuse at a young age makes it quite clear: superficial and simple restrictive measures, such as advertising and marketing bans, are basically only an expression of helplessness on the part of health politics in the face of symptoms which must be seen in a totally different causal network.

But what must be done in health politics? First of all we need to reach agreement on what the aim of a positive upbringing in handling alcohol should be. There should be child-education in alcohol which establishes responsible enjoyment with these products in the society.

Pleasurable consumption in the alcohol sector is not synonymous with it being detrimental to health and committing a sin.

We recommend:

1. stricter control on adherence to existing laws. Here it must be taken into consideration that: adolescents are extremely sensitive and reject just about anything in adolescence concerning regulations and bans.
2. In our opinion essential prevention work should not leave out the alcohol complex with regard to children and adolescents but instead they should be confronted with it appropriate to their age (at kindergarten - school -

parental home).

3. The central importance for the development of young people learning to handle alcohol comes from the parental home or from those responsible for their upbringing. There is no state regulation, which would be in a position to take direct influence on it. Parents should give more thought to setting a good example and not make a stereotype their argumentation basis for child-rearing, by saying: "You are not grown-up yet ...". Child-rearing which is at home and in the society only characterized by bans and prejudices, must lead to irresponsibility and wrong behaviour.