Master Thesis

Home safely after a night out

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ABSTRACT. Objective: Besides knowledge this study examined the effectiveness of an educational intervention 'Going out safely = Home safely' on actual drinking behaviour, behavioural intention, attitude, and the relationship between self-esteem and assertiveness when dealing with peer pressure. **Method:** A zero measurement and posttest consisting of a questionnaire is conducted among three secondary schools in Overijssel, the Netherlands. The zero measurement is completed by 588 students, the posttest by 633 students, 445 students completed both tests and were included in the analysis. **Results:** Of the participants 48% indicated they have never drank alcohol. Paired Sample T-test indicate that knowledge is improved from M 11.28 to M 12.12 <.01. Behavioural intention for alcohol use during live decreased from M 4.14 to M 3.92 p<.01. Attitude about own drinking behaviour decreased significantly over all time spans p<.01. Multiple regression analysis show that self-esteem and assertiveness are predictors for the level of difficulties adolescents experience when approaching peers about their behaviour. **Conclusions:** This is the first study which examined the effectiveness of the clinic 'Going out safely = Home safely'. Results suggest the clinic improves knowledge and provides students a rational view on their own drinking behaviour. The clinic reduced the chance of drinking in the future and the chance of drinking driving. Last, the clinic 'Going out Safely = Home safely' shows students how to cope with peer pressure, which is one of the biggest influences among adolescents when starting drinking.

Theoretical background

Of all students from secondary schools in the Netherlands 70% has drunk alcohol: approximately as many girls (67%) as boys (72%). In group 7 and 8 of primary school one fifth of the students (19%) has already drunk alcohol, although in this age category more boys (25%) than girls (13%) (Verdurmen, Monshouwer, Van Dorsselaer, Lokman, Vermeulen-Smit, & Vollebergh, 2011). At the age of 12 more than a third of pupils in secondary education has experience with drinking alcohol. During the following years this figure rises substantially. At the age of 15, 83% already have drunk alcohol. From 15 years this percentage gradually increases even further. (Verdurmen et al., 2011). With these numbers the usage of alcohol among the Dutch adolescents belongs among the highest in Europe (Van Dorsselaer, Zeijl, Van den Eeckhout, Ter Bogt & Vollebergh, 2007).

The use of alcohol at a young age increases the risk of serious alcohol-related health problems (van Hoof, 2010). In the short term it is a strong predictor for alcohol abuse and risky sexual behaviour like getting involved in unsafe sex. In the long term, excessive alcohol use is harmful for the adolescent brain, and can be a strong predictor for alcohol addiction. In addition, adolescent excessive alcohol use is also related to school drop-out rates and a decrease in school performance (Anderson, Chrisholm, & Fuhr, 2009; Grant, Scherrer, Lynskey, Lyons, Eisen, Tsuang, True & Bucholz, 2006, Spoth, Greenberg & Turrisi, 2007; van Hoof, 2010, Verdurmen et al., 2011).

Not only a person's own health is at stake when using alcohol. The relationship between the use of alcohol and traffic accidents and other injuries shows that alcohol consumption can cause substantial harm to the health of others (Room, Babor & Rehm, 2005). In the Netherlands, yearly 31.000 adolescents in the age between 10 till 24 years visit the emergency department of a hospital after an alcohol related incident or poisoning. Partly this includes traffic incidents (Hasselt, 2010). Research shows that the use of alcohol increases the risk of an accident, mainly because of decreased coordination, response action, or concentrations (Valkenberg, 2012).

Reducing the use of alcohol

In 2005, the Dutch government decided to take steps to reduce the alcohol use among young people and to postpone the age of onset of alcohol until the age of sixteen (Heemskerk, van den Brink, Steenhuis, de Boer & Breebaart, 2011). The government developed a policy aimed at preventing youth of harmful alcohol use through prevention, care and regulations on the production and sale of alcohol (Hasselt, 2010). The policy is defined in the 'letter with outlines alcohol' (Hoofdlijnenbrief Alcohol) (Tweede Kamer, 2008).

In 2013 the current government (kabinet Rutte-Asscher) accepted a stricter alcohol policy in which alcohol is only sold to people aged 18 and older. The

government also introduced a new alcoholic beverages and catering law (nieuwe Drank- en Horecawet). Young people under the age of 16 are now punishable if they have alcohol in their possession. Also, the Minister of Health, Welfare, and Sport reserved € 6.000.000 to inform youth about the dangers of alcohol. This will be invested in social media and education in schools (Rijksoverheid1, 2013).

Besides the age limit for alcohol sales, a legal limit blood alcohol concentration (BAG) is used for drivers. In the Netherlands, the legal limit for novice drivers is 0.2% and for other drivers 0.5%. The main groups at risk of driving under the influence of alcohol are young men and heavy drinkers. (SWOV, 2011).

According to the government alcohol policy can only be successful when several policy instruments are used together: education and prevention, legislation and self-regulation (and enforcement), charge excise, care and assistance, crime prevention, policy regarding driving under influence, and international policy development. Locally, municipalities are advised about alcohol prevention with the principles of the 'Guide to a healthy council' (Handreiking Gezonde Gemeente). This manual consists of a general part and theme specific parts, about alcohol, smoking, depression, obesity and sexuality (Loketgezondleven1, 2013). The manual provides information about harmful alcohol (numbers and figures, causes, consequences, trends, and important target (risk) groups), and is equipped with a communication package with various information materials, such as brochures, fact sheets, texts and a standard presentation. The communication package has been carefully compiled with partners (Trimbos-instituut, STAP, Expertisecentrum handhaving DHW, & Het Centrum voor Veilig en Gezond Uitgaan) who are specialized in the alcohol problem (Loketgezondleven2, 2013).

Overall the policy developed by the Dutch government aims to focus on youth (school) education, limiting the availability, and prohibitions and advertising restrictions. Measures are implemented at the level where it does best, often at local level. The alcohol policy is thus to some extend tailored to suit local needs and local customs. Municipalities have therefore the lead in how they cope with the alcohol problem, since they have the best view on the local issues in this regard (Hasselt, 2010). As a result many educational interventions are developed in order to educate the Dutch youth about the use of alcohol and about the use of alcohol in traffic (Heemskerk et al., 2011).

Educational interventions

There are several educational activities which are used to inform adolescents about the effects and risks of alcohol use at a young age. These preventive interventions often differ on various characteristics such as purpose, audience and stimulant (alcohol, drugs, smoking, etc.). Most research has been conducted into four forms of prevention: school-based addiction prevention, family-oriented addiction prevention, mass media campaigns and community-oriented intervention (Cuijpers, 2005; Mesken, 2011). The majority of prevention programs is aimed at children and adolescents and is carried out in schools and therefore categorized as school-based addiction prevention. (Cuijpers, 2005; Mesken, 2011).

The reason for this is, research has shown that learning, especially in the early years, generally proceeds from behavioural knowledge (by seeing and doing things) to representational (or symbolic) knowledge. In addition, Koning et al. (2009) indicate that interventions should be delivered at an early stage, at least prior to the onset of weekly drinking. However, skills on how to cope with the temptation of alcohol are not enough. Upbringing, personal circumstances and personal characteristics also play an important role, especially for adolescents who are more vulnerable for peer pressure and overestimating their own abilities (Daemen, Van der Vorst & Engels, 2006; Dragutinovic & Twisk, 2006; Grant et al., 2006; Hasselt, 2010; Jones et al., 2007).

Effective educational interventions

Although there are many educational programmes aimed at youth and alcohol, the effect of the measures taken are often not evaluated (Faes & Shamburg, 2009). Mesken (2011) confirms these findings. According to him nowadays educational programs are evaluated too little. While, to ensure the quality of educational programs, it is important that these programs are properly evaluated. According to Buijs en Busch (2005) little research has been conducted to examine the effectiveness of educational interventions. In addition, the research that has been done show some improvement in knowledge, but lacks to study the effects of this knowledge on actual behaviour, behavioural intention and attitude (Anderson et al., 2009; Buijs & Busch, 2005; Hasselt, 2010, Van Hoof, 2012).

Knowledge. Cuijpers (2005), unlike Buijs and Busch (2005) and Anderson et al. (2009), indicate there are several studies that have been conducted on the effects of school-based prevention programs. Despite this contrast the findings of the authors are the same. Based on research of Tobler and colleagues (2000), Cuijpers also came to the conclusion that almost all school-based prevention programs have large and significant effects on the knowledge of students on stimulants.

Actual drinking behaviour. In contrast with the results on knowledge, in many programs no effect on the actual use can be demonstrated (Cuijpers, 2005; Tobler et al., 2000). Anderson et al. (2009) state that school-based education show some positive effects on increased knowledge and improved attitudes, but no sustained effects on actual behaviour. Actually some educational intervention might even lead to an increase in alcohol use (Werch, & Owen, 2002).

Behavioural intention. While effects on actual alcohol use are hard to prove, some school based prevention programs do have a positive behavioural impact (Van Hoof, 2010). Some studies even found predictions of less future alcohol use (Goodstadt, Sheppard, & Chan, 1982). The study of Shope, Copeland, Maharg and Dielman (1996) found that besides knowledge, perceived ability to resist pressures, and riding with a drinking driver improved, while alcohol use was unchanged. In comparison, Elder et al. (2005) found a positive effect of school-based instructional programmes for reducing riding with drivers under the influence of alcohol. However, there is insufficient evidence to determine the effectiveness of these programmes for reducing drinking and driving.

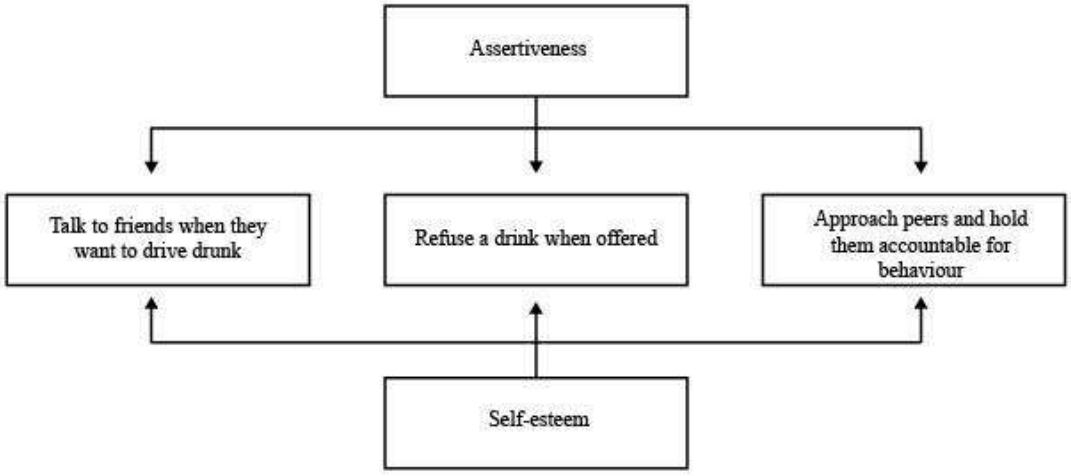
Attitude. Same as for behavioural intention, attitude towards alcohol use is more likely to be influenced by educational interventions than actual drinking behaviour. In comparison with Anderson et al. (2009), Duryea, Mohr, Newman and Martin (1984) found positive effects on knowledge, attitude, and skills. In addition, Perry and Grand (1991) reported positive results on social influences.

A reason for the differences in results between knowledge and the other dependent variables: actual drinking behaviour, behavioural intention and attitude is the influence of susceptibility to peer pressure (Dielman, Campanelli, Shope, & Butchart, 1987; Tobler et al., 2000). Moreover, it can be suggested that peer pressure and peer conformity are potentially greater predictors for risk behaviour (Santor, Messervey, & Kusumakar, 2000). Students who perceived high levels of social support were less likely to report alcohol use initiation, particularly at low levels of peer victimization (Wormington, Anderson, Tomlinson, & Brown, 2013).

Other studies show that the effects of educational intervention are indeed affected by the social environment. People have different needs, circumstances, and personalities and peer pressure has a great influence on the behaviour of adolescents (Cuijpers, 2005; Hasselt, 2010; Hutchinson, 1999; Van den Berg & Schoemaker, 2010). In addition, an integral long-term approach, which focus on both the environment as well as on the individual, seems to be most effective in reducing the prevalence of risk factors (Anderson et al., 2009; Van den Berg & Schoemaker, 2010). Therefore, this study hypothesized that assertiveness and self-esteem are important characteristics for adolescents to cope with peer pressure. Students with a high level of assertiveness and self-esteem are more likely to approach peers when they want to drive under the influence of alcohol, are more likely to refuse a drink when offered and are more likely to approach peers and hold them accountable for their behaviour (figure 1).

In order to examine if educational interventions also have effect on actual behavior, behavioural intention and attitude, the effectiveness of the educational intervention ‘Going out safely = Home safely’ is studied.

Figure 1
Conceptual research model



Method

The effectiveness of the ‘Going out safely = Home safely’ educational intervention has been designed in a within-subject design with a zero measurement and a posttest in an experimental group.

O1 X O2

“Going out safely = Home safely”

'Going out safely = Home safely’ is an educational intervention at secondary schools, given during school hours. The clinic focuses on students in second and third grades of secondary schools. Timely detection of driving under the influence of alcohol from the pub, disco or sports canteen to their home is the central theme during the clinic. In addition, the clinic refers to aggression and antisocial behaviour by excessive alcohol consumption. In this, the bike, scooter, moped and car play a major role.

The clinic is a practical interactive workshop with a theater element. When students enter, pop music is playing and photo’s are showed on a projector. After a short welcome a moderator continues about the prevention and detection of unsafe behaviour from home to disco and back. The students also hear a poem of a girl who has lost a friend in a car accident due to a drunk driver and a photo is showed of a girl who is seriously injured due to a car accident. Next, facts and figures about the use of alcohol among adolescents are presented. When doing so the moderator interacts continuously with the public. Following, two students are picked who throw a ball to each other, first without any attributes, then with an ‘alcohol glasses’. This glasses gives the students the impression that they have drank 25 glasses of alcohol. Next, the moderator discuss the rules and regulations about alcohol use, alcohol use in traffic and safe participation in traffic. Then, the performance starts. Two actors play two friends who are in a nightclub. Both are on their scooter. One of them is drinking alcohol and want to travel home by scooter. The other one does not drink alcohol and tries to convince his friend to leave the scooter at the nightclub if she continues drinking. In the meantime the audience proposes solutions which the actors replay immediately. Together with the audience the actors try to solve the problems which they encounter when replaying the proposed solutions. The clinic ends with a educational quiz about alcohol.

The aim of the intervention 'Going out safely = Home safely’ is to make young people aware of the dangers of driving under the influence of alcohol and to let them know that they can talk to others (peers) about their conducts and account them for irresponsible behaviour. With practical scenes and video clips professional actors interact emotionally and in depth with the participants. Through discussions, participants are heavily involved in resolving cases. Besides knowledge, this clinic actively focus on actual behaviour, behavioral intention and attitude.

After the clinic young people must be more confident and able to confront peers about their irresponsible behaviour related to alcohol and road safety. They are also motivated to (no longer) participate in traffic under the influence of alcohol and to figure out in an early stage how to get home safely.

Procedure

The selected educational institutions are approached by telephone to establish whether or not they were willing to participate in the study. A standard script was used in which institutions were informed that their students would participate in a study examining the effectiveness of the educational intervention ‘Going out safely = Home safely’. Additionally, the schools were requested to inform the parents about the institution’s study participation. The parents had the opportunity to refuse participation, if wanted they could have a look in the questionnaire as well. The informed consent materials stated clearly the expectations of frequency, duration and purpose of study participation. There are no parents who have objected to participation of their child(ren).

The zero measurement and the posttest consisted out of a questionnaire. The questionnaire consisted, as much as possible, of questions of existing questionnaires (Botvin, 2007; ESPAD, 2011; Heemskerk, et al., 2011; Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002; Rosenberg, 1965; Vet & van den Eijnden, 2007). If necessary, formulations were changed for the comprehensibility of the respondents. In addition, new questions on knowledge, behaviour and behavioural intention about alcohol use when participating in traffic were submitted.

All participants filled in the zero measurement one week before the clinic. The posttest was filled in immediately after the clinic. The questionnaires were filled in by hand or online. The questionnaires of the first and second measurement were coupled through a unique code. This code consisted of the first letter of the surname, first letter of the lastname and date of birth. In addition, the participating schools received a factsheet with their specific ‘school’ results.

The recruitment, enrolment in the intervention, the online questionnaires, and selection of participating classes took place during the period of March to June 2013. Prior to the study the questionnaire was tested in two groups of students of schools which were not listed to participate to the clinic ‘Going out safely = Home safely’. After completing the test the questions

and the instructions were discussed with both students and teachers on clarity, comprehensibility and completeness.

Respondents

Participants were students from the second and third class of three secondary schools in Overijssel, the Netherlands, in the 2012-2013 school year. It is assumed that the schools have undergone the same outside influences. Yet there is a risk that in this approach there might be some differences due to causes which vary by school. 588 students completed the zero measurement. The posttest is completed by 633 students. After excluding the students who had filled in just one of the two tests a total sample of 445 (n) students who were involved in both measures remained. The demographic characteristics of the sample at baseline are presented in Table1. The total student sample had a mean age of 14.18 (SD = 0,88), consisting of 46,29% boys, and 45,62% in lower secondary education.

Table 1. Demographic characteristics of sample at baseline

Variable	*M* (range) or frequency %
Age, in years	14.18 (12-17)
Male gender	46.29%
School	
Carmel College Salland	54.38%
Twents Carmel College	24.94%
Talentstad	20.67%
Level of education	
VMBO/MAVO	45.62%
HAVO	26.97%
VWO	27,42%
Living situation	
Both parents	81.34%
Mother	9.44%
Father	2.47%
Parents alternately	5.39%
Other	1.34%

N = 445

Questionnaire

The zero measurement questionnaire consisted 33 questions. To the posttest a set of four questions was added for the process evaluation of the clinic 'Going out safely = Home safely'. In order to compare the results of the zero measurement and posttest properly, both tests consisted the same questions.

The central part of the questionnaire consisted of questions about the use of alcohol and the use of alcohol when participating in traffic. The questions measured knowledge, actual alcohol use, attitude and behavioural intention. In addition, the usage throughout life (lifetime prevalence), the usage in the last twelve months (year prevalence), the usage in the last four weeks (month prevalence) and the usage of the last seven days (week prevalence) was measured. Besides the questions about alcohol use there were also questions about the background characteristics, sensation seeking level (Hoyle et al, 2002), assertiveness level (Botvin, 2007) and self-esteem level (Rosenberg, 1965).

Knowledge about alcohol is measured with one question which consisted 18 items about alcohol. The respondents could answer with 'true', 'false', or 'I don't know'. Each correct answer was worth 1 point. I don't know was counted false. The points together formed the total score for knowledge.

Actual drinking behaviour was measured by two 4-item, five 6-item and one 9-item questions. The results provide an insight in how much the students actually drink. Actual behaviour about alcohol use and participation in traffic was measured by seven questions (ESPAD, 2011).

Attitude towards alcohol drinking was measured by one 4-item, one 5-item en two 6-item questions. The questions were about the beliefs respondents commit to drinking alcohol (I think it is more fun when me and my friends drink alcohol) and if they think their alcohol drinking behaviour is responsible or irresponsible. The answers were measured on a 5-point Likert scale. The points together formed the total score for attitude.

Behavioural intention of alcohol use in the future was measured by one 4-item, one 11-item and one 19-item questions. All questions were about how likely it will be that respondents will show specific behaviour. The answers were measured on a 5-point Likert scale. The points together formed the total score for behavioural intention.

Sensation Seeking was measured by the Brief Sensation Seeking Scale of Hoyle et al. (2002). Participants indicated responses to all sensations seeking items (8). Due to the fact that instead of a five-point Likert scale, a two-point Likert scale (agree or disagree) was used, this question was eliminated from the results.

Assertiveness was measured with a 3-item scale developed by Botvin (2007) using a five-point Likert scale. The mean of the score subtracted from 6 creates the summary score. Higher scores represent more frequent use of assertiveness skills.

Self-esteem was measured by Rosenberg's (1965) Self-esteem scale. It is a ten-item Likert-type scale with items answered on a four-point scale, from strongly agrees to strongly disagrees. The total score indicate the level of self-esteem of the respondent.

Analysis

First, descriptive analyses were conducted on the alcohol consumption variables (intensity and frequency) to examine the drinking behaviour of respondents, alcohol use in traffic, attitude about

alcohol use and probability of alcohol use. Secondly, paired sample *T*-tests were used to compare the responses between the zero measurement and the posttest. When analyzing the results of actual alcohol use, the respondents with the answer 'never' were excluded. Third, multiple regression analysis is done to examine if assertiveness and self-esteem can predict if adolescents talk to their friends if they want to drive drunk, if it is easier to refuse a drink when offered, and if they approach peers and hold them accountable for their behaviour.

Results

Alcohol use

When asked 'When was the last time you drank alcohol' 48% indicated they never drank alcohol. The last time participants drank is between 8 till 30 days before they filled in the zero measurement. On average, the participants drank their first sip of alcohol when they were 11 years old (M = 11,3: $p > .05$). The first time they are drunk was at 14 years old (M = 14,04: $p > .05$) (Table 2.).

Variable	Zero measurement *M* (SD)	Posttest *M* (SD)	*N*
Sip of alcohol	11.25 (2.08)	11.35 (2.06)	*318*
Glass of beer	13.16 (1.63)	13.18 (1.73)	*120*
Glass of wine	13.70 (1.26)	13.44 (1.48)*	*69*
Bottle premix	13.53 (1.20)	13.59 (1.30)	*118*
Shooter	13.65 (1.28)	13.60 (1.45)	*122*
Glass strong drink	14.05 (1.10)	13.81 (1.41)	*86*
Self mixed glass	13.97 (1.13)	13.71 (1.58)	*102*
Drinking regularly and on their own	14.32 (0.92)	13.97 (1.50)*	*74*
Being drunk	14.14 (1.12)	13.93 (1.45)	*68*

Paired sample T-test
*$p < .05$; **$p < .01$.

Table 3. presents the means for actual alcohol use among the respondents who are already drinking alcohol. Although the mean number indicate that students have drunk more when filling in the posttest, the paired sample T-test indicate that the difference between the means of the zero measurement and posttest of alcohol use the last day are not significant. The total amount of alcohol participants consume during the last day they drank is *M* 6,60 glasses. On the contrary there is a significant difference when looking at how often students drank the last seven days and the last four weeks (*M* 2.43 - *M* 4,69; $p < .01$, *M* 4.29 – *M* 6,76; $p < .01$).

Table 2. Mean age for the first…

Table 3. Alcohol use among drinkers

Variable	Zero measurement *M* (SD)	Posttest *M* (SD)	*N*	
Alcohol use				
Last 7 days	2.43 (2.07)	4.69 (6.12)**	*80*	
Last 4 weeks	4.29 (4.01)	6.76 (8.14)**	*135*	
Last 12 months	10.84 (11.64)	11.78 (12.35)	*286*	
During life	16.22 (15.18)	15.44 (15.19)	*220*	
Alcohol use last day				
Beer	2.97 (2.20)	2.99 (2.40)	*77*	
Wine	2.00 (1.30)	1.98 (1.01)	*26*	
Premix	2.71 (3.00)	3.07 (2.32)	*61*	
Shooter	3.83 (2.64)	3.70 (2.48)	*47*	
Strong drink	3.56 (2.45)	2.93 (2.32)	*41*	
Self mixed	3.42 (2.69)	3.18 (2.52)	*59*	
Total amount last day	6.29 (6.91)	6.60 (8.03)	*193*	
Alcohol use last 7 days				
Beer	3.24 (2.73)	3.91 (3.97)	*44*	
Wine	1.95 (1.01)	4.77 (4.95)	*11*	
Premix	2.18 (1.41)	4.85 (4.75)**	*31*	
Shooter	2.57 (1.87)	4.76 (3.69)**	*23*	
Strong drink	3.24 (4.58)	4.42 (4.03)	*19*	
Self mixed	3.26 (4.07)	5.07 (5.19)*	*27*	
Total amount last 7 days	6.15 (9.20)	12.88 (16.25)**	*85*	
Alcohol use last 4 weeks				
Beer	5.82 (5.29)	5.71 (5.09)	*77*	
Wine	2.63 (2.30)	2.87 (3.25)	*38*	
Premix	3.30 (2.59)	4.20 (4.21)*	*69*	
Shooter	4.23 (3.49)	6.12 (5.85)*	*56*	
Strong drink	4.03 (4.65)	4.10 (4.16)	*48*	
Self mixed	5.05 (5.00)	5.27 (5.74)	*57*	
Total amount last 4 weeks	10.34 (12.31)	14.42 (19.76)**	*156*	
Last time drinking alcohol	2.52 (1.11)	2.35 (1.46)*	*232*	8 – 30 days ago
Five or more drinks during 1 occasion in last 7 days	2.64 (2.60)	3.37 (3.15)	*53*	
Five or more drinks during 1 occasions last 4 weeks	3.75 (3.10)	3.62 (2.81)	*82*	
Times drunk				
Last 7 days	2.50 (3.61)	3.00 (2.26)	*13*	
Last 4 weeks	3.22 (2.73)	4.67 (7.85)	*27*	
Last 12 months	5.91 (7.43)	7.66 (9.21)	*52*	
During life	8.02 (10.41)	9.71 (11.76)	*70*	

Notes: The means of alcohol use last day, alcohol use last 7 days and alcohol use last 4 week are presented in amount of glasses. *Paired sample T-test* *$p < .05$; **$p < .01$.

Alcohol use in traffic

The results for alcohol use and participating in traffic are presented in Table 4, 5 and 6. Table 4 presents an overview for amount of glasses with alcohol students approve when driving. Paired Sample T-test indicate that the amount of glasses students approve to consume is less after participating in the clinic 'Going out safely = Home safely' ($p < .01$). Still if driving with somebody else, respondents allow that person more drinks with alcohol than they would drink themselves if they drive. In addition, when driving a moped or scooter the students' state you can drink more glasses of alcohol than if you drive a car.

Of all 430 students 7% indicated they have participated in traffic under influence of alcohol during the last seven days, while during life this amount increased to 20%. In addition, during the posttest the participation in traffic is increased the last seven days. However, accepting a ride and ride with somebody who had alcohol decreased, while using a BOB increased. (Table 5.).

Means of what students will do when a friend drank too much and wants to participate in traffic is represented in table 6. 'Call the police' scores a higher mean in the posttest, in all other proposed situations the mean is lower. Paired Sample T-test indicates that the chances students will execute the proposed solution is smaller ($p < .05$: $p <$,01).

Table 4. After how many drinks do you disapprove driving?

Variable	Zero measurement *M* (SD)	Posttest *M* (SD)	*N*
Driving self			
Bike	5.27 (2.77)	4.28 (2.67)**	421
Moped/scooter	2.96 (1.68)	2.58 (1.55)**	420
Car	2.35 (1.47)	2.11 (1.41)**	422
Driving with somebody else			
Bike	5.00 (2.69)	4.05 (2.58)**	425
Moped/scooter	3.13 (1.93)	2.59 (1.74)**	425
Car	2.80 (1.90)	2.30 (1.63)**	424

Notes: The means are presented in amount of glasses.
Paired sample T-test
*$p < .05$; **$p < .01$.

Table 5. Alcohol use and participating in traffic

	Including answer never			Excluding answer never		
Variable	Zero measurement *M* (SD)	Posttest *M* (SD)	*N*	Zero measurement *M* (SD)	Posttest *M* (SD)	*N*
Participating in traffic						
Last 7 days	0.23 (1.01)	0.58 (2.12)**	*430*	2.38 (2.63)	3.80 (5.66)	*30*
Last 4 weeks	0.65 (2.39)	0.87 (2.33)	*428*	3.50 (3.85)	4.05 (4.03)	*62*
Last 12 months	1.72 (5.36)	1.90 (4.87)	*429*	7.85 (9.47)	7.73 (8.25)	*81*
During life	2.94 (7.89)	3.11 (7.98)	*430*	12.03 (12.48)	11.08 (12.30)	*90*
Offered a ride by somebody who has been drinking						
Last 7 days	0.17 (1.65)	0.45 (2.53)*	*431*	5.86 (10.47)	4.07 (3.21)	*7*
Last 4 weeks	0.27 (1.83)	0.65 (2.69)*	*431*	3.60 (3.49)	4.00 (3.57)	*15*
Last 12 months	0.74 (3.47)	1.42 (4.76)**	*430*	7.03 (6.73)	10.17 (10.63)	*29*
During life	1.52 (5.93)	2.68 (7.74)**	*432*	10.84 (12.33)	12.98 (14.47)	*43*
Ride with somebody who had alcohol						
Last 7 days	0.12 (0.65)	0.47 (2.52)**	*429*	2.25 (2.12)	1.81 (0.88)	*8*
Last 4 weeks	0.39 (1.58)	0.74 (2.75)*	*429*	3.58 (3.63)	2.82 (2.06)	*25*
Last 12 months	1.43 (5.24)	1.57 (4.38)	*428*	7.62 (9.46)	7.60 (7.68)	*49*
During life	2.83 (8.28)	3.44 (8.40)	*430*	9.84 (12.85)	10.22 (12.08)	*88*
Using public transport						
Last 7 days	0.09 (0.88)	0.29 (2.48)	*429*	4.75 (6.50)	3.00 (3.00)	*4*
Last 4 weeks	0.10 (0.84)	0.36 (2.31)*	*428*	4.08 (5.20)	4.17 (1.92)	*6*
Last 12 months	0.22 (1.15)	0.63 (3.26)**	*427*	3.75 (3.57)	8.18 (10.13)	*14*
During life	0.44 (2.55)	1.05 (4.86)**	*428*	6.08 (8.86)	9.40 (11.50)	*20*
Using a BOB						
Last 7 days	0.74 (4.54)	0.80 (4.60)	*427*	6.78 (11.50)	8.47 (13.17)	*16*
Last 4 weeks	0.97 (4.84)	1.03 (4.73)	*426*	6.48 (10.08)	7.81 (11.50)	*27*
Last 12 months	1.88 (6.90)	1.96 (6.67)	*428*	10.40 (12.85)	12.03 (13.91)	*47*
During life	3.56 (10.24)	3.40 (9.77)	*427*	17.03 (16.56)	15.97 (16.53)	*58*

Notes: BOB = deliberately sober driver
Paired sample T-test
*$p < .05$; **$p < .01$.

Table 6. Attitude when friends drink and participate in traffic

Variable	Zero measurement *M* (SD)	Posttest *M* (SD)	*N*
Walking			
Talk to friend about behaviour	3.54 (1.16)	3.11 (1.26)**	*430*
Call parents of friend	2.29 (1.12)	2.11 (1.09)**	*428*
Call a cab	2.96 (1.18)	2.64 (1.24)**	*430*
Call the police	1.25 (0.58)	1.52 (0.87)**	*429*
Cycling			
Talk to friend about behaviour	3.73 (1.10)	3.39 (1.20)**	*428*
Take keys	2.85 (1.24)	2.71 (1.16)*	*427*
Call parents of friend	2.27 (1.16)	2.20 (1.12)	*424*
Call a cab	2.85 (1.19)	2.76 (1.19)	*427*
Call the police	1.30 (0.63)	1.58 (0.90)**	*426*
Moped / scooter			
Talk to friend about behaviour	4.33 (0.93)	3.83 (1.15)**	*430*
Take keys	3.71 (1.24)	3.25 (1.22)**	*429*
Call parents of friend	2.69 (1.29)	2.49 (1.25)**	*426*
Call a cab	3.25 (1.25)	3.11 (1.22)*	*430*
Call the police	1.48 (0.84)	1.71 (0.99)**	*429*
Car			
Talk to friend about behaviour	4.50 (0.90)	4.02 (1.14)**	*428*
Take keys	4.03 (1.20)	3.56 (1.24)**	*427*
Call parents of friend	2.96 (1.40)	2.75 (1.33)**	*426*
Call a cab	3.50 (1.29)	3.41 (1.25)	*428*
Call the police	1.66 (1.02)	1.90 (1.14)**	*429*

Notes: Attitude when friends drink and participate in traffic is based on a 5-point Likert scale, whereas 1 = will definitely not do and 5 = will definitely do.
Paired sample T-test
*p < .05; **p < .01.

Table 7. Knowledge

Variable	Zero measurement *% right answer*	Posttest *% right answer*	*N*
1. Alcohol is a drug	45%	75%**	*436*
2. Alcohol provides fast response	87%	84%	*434*
3. Cycling drunk on the public road is an offence	66%	82%**	*437*
4. A glass of beer holds the same amount of alcohol as a glass of wine	22%	30%**	*435*
5. Alcohol provides a better sight	83%	81%	*436*
6. A glass of beer holds the same amount of alcohol as a glass of strong drink	11%	21%**	*435*
7. Alcohol improves concentration	88%	82%**	*437*
8. 0,2 promille is two glasses of alcohol	30%	43%**	*436*
9. Walking drunk on the public road is an offence	43%	58%**	*435*
10. By drinking alcohol you dare to take more risks	86%	77%**	*436*
11. Alcohol provides a better memory	90%	80%**	*437*
12. Coffee and water remove alcohol more quickly out of your body	20%	34%**	*437*
13. Alcohol provides a slower reaction	87%	83%	*436*
14. Alcohol stays around 1 to 2 hours in your blood	59%	70%**	*434*
15. Alcohol provides less sight	73%	80%**	*435*
16. Alcohol influences your mood	91%	82%**	*434*
17. Alcohol provides a better attention	90%	82%**	*432*
18. Most victims in traffic are younger than 24	60%	77%**	*434*
Average score of right answers	*M* 11,28	*M* 12,12**	*439*

Paired sample T-test
*p < .05; **p < .01.

Knowledge

Table 7 provides an overview of the scores of the 18 items about alcohol and a total score of all items together. On eight items the students scored worse in the posttest, although for three of those the results are not statistically significant. On all other items the students scored significantly better. The zero measurement average total score is 11.28, whereas the posttest average total score is 12.12. Paired Sample T-test indicate that the knowledge is increased significantly after participating in the clinic ‘Going out safely = Home safely’ (p <.01).

Attitude and behavioural intention

Table 8. provides an overview of the results for attitude about alcohol use. Two of the six items about drinking in general had significant differences between the zero measurement and the posttest. 'I think it is more fun with others when drinking' and 'drinking a few drinks is a nice way to celebrate something special' scored a lower mean ($p < .05$; $p < .01$). All items scored in the posttest between *M* 2.59 and *M* 2.94 (5-point Likert). Of the six items about drinking and peer pressure, three scored significantly lower ($p < .01$) in the posttest. 'Refusing a drink when offered', 'explaining why not drinking' and 'talk to my friends when they want to drive under influence' happen to be harder to execute after the clinic 'Going out safely = Home safely'. Looking at the attitude about their own drinking behaviour in all cases students indicate in the posttest that their alcohol use is more unresponsive (*M* 3.92 – *M* 3.98; $p < .01$) than when conducting the zero measurement (*M* 4.15 – *M* 4.35). On the contrary there is a significant negative difference in the responsiveness about drinking alcohol every day, *M* 1.38 – *M* 1.50, whereas 5 is very responsive. In addition the students are asked about the probability they will drink in the proposed time span. The results are presented in table 9. The most likely students indicate they will experience when drinking alcohol is 'having a lot of fun' (*M* 3.54; $p < .05$). Second thing they indicate they will experience is 'feeling happy' (*M* 3.47). Students indicate that they will most unlikely experience 'getting in trouble with police' (*M* 2.00) and 'cannot stop drinking' (*M* 2.07). Although they both score significant differences between the zero measurement and the posttest ($p < .01$). When asking about the probability of alcohol use in the proposed time span the difference between alcohol use during life is significant. Whereas the students indicate in the posttest, that the change of drinking during life is less.

Table 8. **A**ttitude about alcohol use

Variable	Zero measurement *M* (SD)	Posttest *M* (SD)	*N*
Attitude about drinking in general	**α 0,88**	**α 0,92**	
I think it is more fun with others when drinking	2.81 (1.30)	2.68 (1.23)*	*430*
Drinking a few drinks is a nice way to celebrate something special	3.12 (1.22)	2.94 (1.19)**	*431*
By drinking it is more easier for me to have a nice time on a party	2.65 (1.18)	2.59 (1.12)	*429*
By drinking it is more easier for me to open myself and show my feelings	2.65 (1.18)	2.67 (1.10)	*430*
I have more fun when drinking	2.65 (1.20)	2.64 (1.16)	*430*
Drinking allows me to forget my problems	2.62 (1.22)	2.63 (1.14)	*430*
Total score	**2.75 (0.97)**	**2.69 (0.97)**	**431**
Attitude about drinking and peer pressure	**α 0,75**	**α 0,87**	
Not drinking when friends are drinking	3.58 (1.09)	3.48 (1.11)	*433*
Refuse a drink when offered	3.74 (1.03)	3.55 (1.10)**	*430*
Staying (or becoming) a not drinker	3.15 (1.08)	3.12 (1.17)	*429*
Explaining why not drinking	3.70 (1.00)	3.57 (1.03)**	*430*
Talk to my friends about their behaviour when drinking	3.42 (1.13)	3.40 (1.05)	*431*
Talk to my friends when they want to drive drunk	4.02 (0.99)	3.62 (1.09)**	*432*
Total score	**3.53 (0.69)**	**3.46 (0.85)***	**435**
Attitude about own			
Alcohol use last 7 days	4.35 (1.15)	3.92 (1.45)**	*432*
Alcohol use last 4 weeks	4.25 (1.14)	3.98 (1.36)**	*427*
Alcohol use last 12 months	4.15 (1.20)	3.93 (1.35)**	*427*
Alcohol use during life	4.17 (1.17)	3.93 (1.34)**	*426*
Attitude about alcohol use if now			
Drinking every day	1.38 (0.76)	1.50 (0.89)*	*432*
Drinking ones a week	2.93 (1.26)	2.80 (1.26)*	*433*
Drinking twice a week	2.65 (1.24)	2.62 (1.21)	*429*
Drinking ones per 4 weeks	3.79 (1.27)	3.58 (1.28)**	*432*
Drinking twice per 4 weeks	3.68 (1.28)	3.58 (1.29)	*433*

Notes: Attitude about drinking in general is based on a 5-point Likert scale, whereas 1 = very much disagree and 5 = very much agree. Attitude about drinking and peer pressure is based on a 5-point Likert scale, whereas 1 = very hard and 5 = very easy. Attitude about own and attitude about alcohol use if now is based on a 5-point Likert scale, whereas 1 = very unresponsive and 5 = very responsive.
Paired sample T-test
*$p < .05$; **$p < .01$.

Table 9. Behavioural attention

Variable	Zero measurement *M* (SD)	Posttest *M* (SD)	*N*
Probability			
Feeling relaxed	3.20 (1.22)	3.30 (1.19)	*433*
Getting in trouble with police	1.69 (0.96)	2.00 (1.05)**	*434*
Harming health	2.46 (1.28)	2.57 (1.21)	*430*
Feeling happy	3.53 (1.21)	3.47 (1.16)	*431*
Forgetting problems	2.85 (1.33)	2.93 (1.18)	*428*
Can't stop drinking	1.83 (1.00)	2.07 (1.06)**	*432*
Getting a hangover	2.50 (1.28)	2.58 (1.18)	*433*
Feeling more friendly	2.76 (1.20)	2.99 (1.10)**	*433*
Doing something which you regret	2.40 (1.21)	2.44 (1.14)	*434*
Having a lot of fun	3.66 (1.27)	3.54 (1.19)*	*433*
Feeling sick	2.35 (1.18)	2.57 (1.13)**	*434*
Probability about alcohol use			
Next 7 days	1.97 (1.36)	1.93 (1.28)	*432*
Next 4 weeks	2.18 (1.42)	2.22 (1.41)	*432*
Next 12 months	2.89 (1.53)	2.85 (1.49)	*432*
During life	4.14 (1.23)	3.92 (1.35)**	*432*

Notes: Probability is based on a 5-point Likert scale, whereas 1 = very unlikely and 5 = very likely.
Paired sample T-test
*$p < .05$; **$p < .01$.

Self-esteem and assertiveness

Descriptive statistics show that self-esteem and assertiveness is reduced after participating the clinic 'Going out safely = Home safely'.

Table 10. **S**elf-esteem and assertiveness

Variable	Zero measurement *M* (SD)	Posttest *M* (SD)	*N*
Self-esteem	3.76 (0.50)	3.56 (0.53)**	435
Assertiveness	3.01 (0.77)	2.94 (0.89)**	427

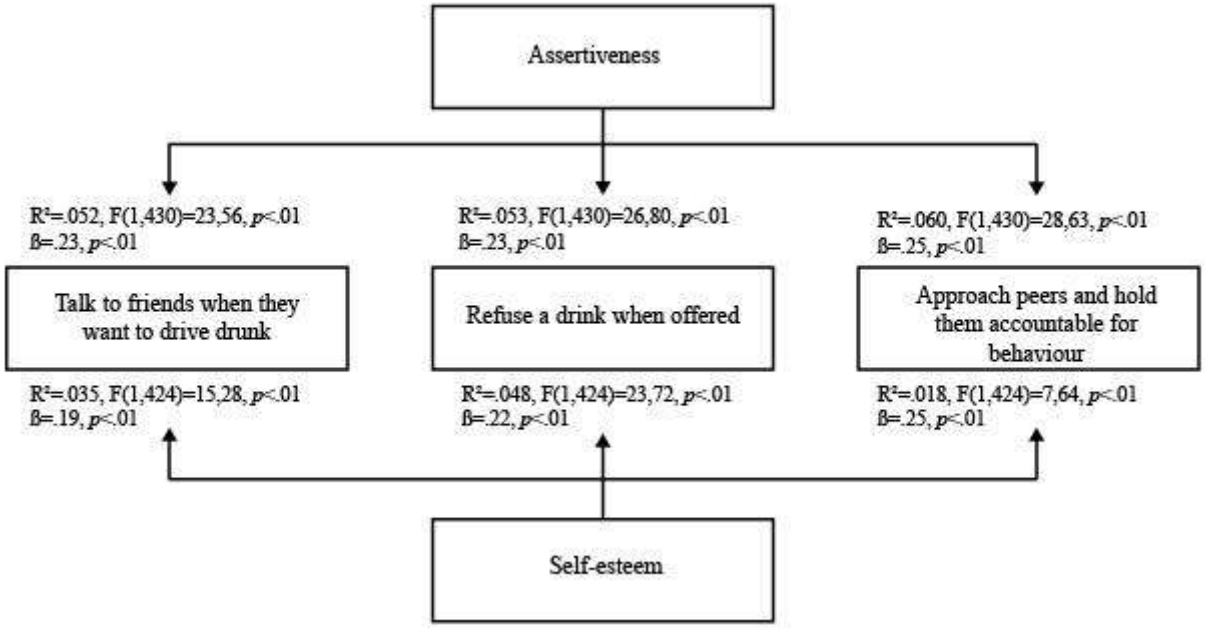
Notes: Self-esteem is measured with a 4-point Likert scale, whereas 1 = very much disagree and 4 = very much agree. A high score means a high level of self-esteem. Assertiveness is measured with a 5-point Likert scale, whereas 1 = definitely will do and 5 = definitely will not do. Higher scores represent a more frequent use of assertiveness skills.
*$p < .05$; **$p < .01$.

In the posttest multiple regression analysis was used to test if the level of assertiveness significantly predicts if respondents 'talk to my friends when they want to drive drunk' The results of the regression indicated the predictor explained 5% of the variance (R^2=.052, F(1.430)=23.56, p<.01). It was found that assertiveness significantly predicted 'talk to my friends when they want to drive drunk' (β = .23, p< .01). Same as for self-esteem, multiple regression analysis shows that self-esteem explained 3% of the variance 'talk to my friends when they want to drive drunk' (R^2=.035, F(1.424)=15.28, p<.01). Self-esteem also significantly predicted 'talk to my friends when they want to drive drunk' (β = .19, p< .01).

The level of assertiveness also significantly predict (β = .23, p< .01) if respondent are able to refuse a drink when offered. The results of the regression indicated for assertiveness as predictor explained 5% of the variance (R^2=.053, F(1.430)=26.80, p<.01). Self-esteem also significantly predicts (β = .22, p< .01). and explained 5% of the variance (R^2=.048, F(1.424)=23.72, p<.01).

To approach peers and hold them accountable for their behaviour is also significantly predicted by assertiveness (β = .25, p< .01) and self-esteem (β = .13, p< .01). Assertiveness explained 6% of the variance (R^2=.060, F(1.430)=28.63, p<.01) and self-esteem 2% of the variance (R^2=.018, F(1.424)=7.64, p<.01). Figure 2 presents the conceptual research model with the results.

Figure 2
Conceptual research model results



Discussion

The current study was designed to examine the effectiveness of the clinic 'Going out safely = Home safely' among second and third year students of secondary schools. Besides knowledge, actual alcohol use, behavioural intention and attitude is examined. In addition the study hypothesized that students with a high level of self-esteem and assertiveness are more likely to cope with peer pressure. The results are based on students who filled in the zero measurement as well as the posttest.

Results suggest that, consistent with the study of Dragutinovic & Twisk (2006), respondents have had their first experience with alcohol before they were twelve. The average age on which the students start drinking regularly and on their own is when they are 14 years old. Remarkably, the results show that adolescents drink more after the zero measurement. This might be because the respondents are influenced by the questions of the test. Another explanation can be that they started to consider their actual drinking behaviour. This could be explained by the fact that there is only a significant difference between the last seven days and the last 4 weeks, while there is no significant difference between the last 12 months and during life. These results are coherent with the existing literature and show that repetition is necessary to determine if respondents are influenced by the zero measurement (Twisk et al., 2007; Van den Berg & Schoemaker, 2010).

The broader literature show that most of the educational interventions do have effect on knowledge, but do not show effect on actual behaviour. This is consistent with the results found in this study. Results show that knowledge significantly improved after participating in the clinic 'Going out safely = Home safely' when looking at the total means. Still, eight of the eighteen items scored worse in the posttest. When looking at the separate school results the level of education might explain these scores. Students of the Twents Carmel College (VMBO/MAVO) scored on eight propositions worse in the posttest and students from Talentstad (VMBO/MAVO) scored worse on eleven propositions. While students of the Carmel College Salland (HAVO and VWO) scored worse on five propositions in the posttest. Another explanation might be the moderator. Not in every show the same moderator was involved. Future research is necessary to examine these hypothesizes.

Because of the short time span between the clinic and the posttest it is hard to say something about the effects on actual behaviour. On the other hand the results do show effect on behavioural intention which might implicate that there can be effects on actual behaviour as well. In all proposed time spans the respondents indicated the probability of drinking is less, with a significant effect on the time span 'during life'. This is consistent with other studies which found predictions of less future alcohol use (Goodstadt, Sheppard, & Chan, 1982). Yet, in comparison with other literature (Van Hoof, 2010) the results of actual drinking behaviour and behavioural intention of this study also leave room for discussion. There is insufficient evidence to determine if drinking among adolescents and drinking and driving is really reduced.

An important element of the clinic 'Going out safely = Home safely' is alcohol use when

participating in traffic. The findings show that, when driving themselves, respondents allow themselves more glasses when driving by moped or scooter than when driving by car. Meaning that a moped or scooter is seen as less dangerous for traffic accidents than a car. These findings corresponds with existing literature which shows that young moped riders have a higher casualty rate because they more often overestimate their own skills and underestimate the risks associate with road use (Goldenbeld & Houwing, 2001; SWOV young novice drivers). Moreover, respondents indicate that if they drive with somebody else, that person is allowed to consume more alcohol than if they are driving themselves. This also matches with previous studies. Youths state that in general they do not step into anybody's car at random. Yet, when the driver is a friend, they are less careful (SWOV, Young drivers and their young passengers). Nevertheless, in the posttest students indicated that the amount of glasses with alcohol students allow themselves and others to drink if they are driving is less than before they participated in the clinic. Another interesting finding in the posttest is that the use of a BOB increased the last seven days, while accepting a ride and ride with somebody who has been drinking decreased. Whereas, the respondents do indicate they participated more in traffic the last seven days. This could indicate that the zero measurement ensured respondents to think about participating in traffic under the influence of alcohol. On the other hand, the use of public transport is very rare. This might be because public transport is not available during night. Further research needs to be done to study these hypotheses.

There are several potential explanations for the mixed findings considering attitude and intentional behaviour. For example, it is possible that the clinic 'Going out safely = Home safely, ensures that respondents start to think about their actual behaviour. When conducting the zero measurement, students had no information about the clinic what so ever. It is possible the questions stimulated respondents to track their actual alcohol consumption the week after the zero measurement. Another possibility is that respondents overestimate the power of peer pressure when accomplish the zero measurement. The clinic 'Going out safely = Home Safely' showed them the actual power of peer pressure and the difficulties people experience when approaching friends if they want to drive drunk, to refuse a drink, or to approach peers about their behaviour. Both explanations could also explain the lower means for self-esteem and assertiveness. The clinic 'Going out Safely = Home safely' not necessarily decreases self-esteem and assertiveness, but provides adolescent a rational view on reality.

An important design feature of the current study was to examine if the level of assertiveness and self-esteem of respondents can predict the resistance against peer pressure. This study hypothesized that assertiveness and self-esteem are important characteristics for adolescents to cope with peer pressure. When looking at the results, both assertiveness and self-esteem significantly predict the level of difficulty adolescents have to talk to their friends when they want to drive drunk, to refuse a drink when it is offered, and to approach friends and hold them accountable for their behaviour. The higher the level of assertiveness and self-esteem the easier it is to talk to a friend. And so, the hypothesize can be accepted. Yet, the variance is pretty low. It is possible that the questions of the survey are not properly assigned. Therefore future and more extensive research is necessary to examine these hypotheses.

This study provides a first insight in how an educational intervention has influence on attitude and intentional behaviour. Whereas most existing literature often limits to knowledge. Nonetheless, several limitations have to be mentioned. First the study has been designed in a within-subject design with a pre- and a post-test in an experimental group. With this design it is hard to show if the results of the posttest are influenced by external conditions like: school parties or village festivals. Second, the clinic 'Going out safely = Home safely' has several actors. Not in every show the same actors and moderator are involved. This may influence the perception and credibility of the clinic. Third the duration of the survey was very long. Especially the students with a lower educational school level were struggling to stay focused. Further research is recommended to note the difference in level of education. Although, the sample of this study (Table 1) corresponds to the Dutch education average (CBS) of adolescents in secondary schools, the results provide enough evidence for future research to study the differences in education level in dept.

Despite these limitations, the study offers important implications for alcohol use prevention among adolescents. Results show that it is possible to influence behavioural intention and attitude. Meaning that the clinic actually does have influence on the minds of adolescents. However, further research must examine if there is any influence on long term behaviour.

Conclusions

Overall the main conclusions of this study are:
- Knowledge significantly improved after participating in the clinic 'Going out safely = Home safely' when looking at the total means. Still future

research is necessary to examine why the participants scored worse on eight of the eighteen items.
● Actual drinking behaviour increased after the zero measurement when looking at the results of ‘drinking the last seven days. Repetition of the study is necessary to examine if the students are influenced by the questions of the zero measurement.
● A positive statistical difference is found for intentional behaviour during life. Respondents indicate the chance that they will drink during life is less in the posttest. In addition the results indicate that respondents start to think about participating in traffic under the influence of alcohol after the zero measurement. The results suggest that the respondents will use a BOB more and that they will ride with a drinking driver less. Also the number of drinks with alcohol, students approve when driving is less in the posttest.
● The results for attitude about alcohol use show hardly any positive statistical differences for attitude about drinking in general. However, the results do show that respondents think their behaviour is more unresponsive after participating in the clinic. Meaning their attitude is changed.
● The results of the study show that assertiveness and self-esteem predict the level of difficulty adolescents have when coping with peer pressure. Yet, the variance is pretty low. Therefore future research is necessary to further examine this hypothesis.

In general the clinic ‘Going out Safely = Home safely’ is effective when improving knowledge. Second, the clinic provides students who already drink alcohol a rational view on their own drinking behaviour. Third, the clinic reduced the chance of drinking in the future and the chance of drinking driving. Last, the clinic ‘Going out Safely = Home safely’ shows students how to cope with peer pressure, which is one of the biggest influences among adolescents when starting drinking.

References

Rijksoverheid. Retrieved January 20, 2013, from http://www.rijksoverheid.nl/nieuws/2010/04/22/opnieuw-daling-aantal-verkeersdoden%5B2%5D.html)

Rijksoverheid1. Retrieved January 30, 2013, from http://www.rijksoverheid.nl/onderwerpen/alcohol/jongeren-en-alcohol)

Loketgezondleven1. Retrieved January 30, 2013, from http://www.loketgezondleven.nl/settings/gezonde-gemeente/

Loketgezondleven2. Retrieved January 30, 2013, from http://www.loketgezondleven.nl/settings/gezonde-gemeente/alcohol/

CBS. Retrieved September 22, 2013, from http://www.cbs.nl/nl-NL/menu/themas/onderwijs/cijfers/default.htm

Anderson, P., Chrisholm, D., & Fuhr, D.C. (2009). Programmes to reduce the harm caused by alcohol. *Lancet, 373*, 2234-2246

Botvin, G.J. (2007). *Assertiveness Scale.* Life Skills Training Questionnaire 2007 – Middle School.

Bovens, R.H.L.M., & Meijer, S. (2012). Wat is de effectiviteit en gezondheidswinst van preventie gericht op alcoholgebruik? In: Volksgezondheid Toekomst Verkenning, Nationaal Kompas Volksgezondheid. Bilthoven: RIVM, http://www.nationaalkompas.nl NationaalKompas Volksgezondheid \ Gezondheidsderterminanten \ Leefstijl \ Alcoholgebruik, versie 4.10, 13 december 2012 © RIVM, Bilthoven

Cuijpers, P. (2002) Effective ingredients of school-based drug prevention: a systematic review. *Addictive Behaviours, 27*, 1009–1023.

Cuijpers, P. (2005). Zin en onzin van verslavingspreventie. Betekenis voor de praktijk. *Verslaving, 2*, 3-16

Daemen, C, Van der Vorst, H, & Engels, R. (2006). Opvoedingsstijlen, ouderlijk alcoholgebruik en alcoholgebruik van adolescenten: een longitudinale studie. *Pedagogiek, 26*(2), 192-208.

Dielman, T.E., Campanelli, P.C., Shope, J.T., & Butchart, A.T. (1987). Susceptibility to peer pressure, self-esteem and health locus of control as correlates of adolescent substance abuse. *Health Education Quarterly, 14*(2), 207-221.

Dragutinovic, N., & Twisk, D. (2006). The effectiveness of road safety education. *A literature review.* Leidschendam: SWOV Institute for Road Safety Research, The Netherlands

Duryea, E., Mohr, P., Newman, I.M., & Martin, G.L. (1984). Six-month follow-up results of a preventive alcohol education intervention. *Journal of Drug Education, 14*, 97-104.

Elder, R.W., Nichols, J.L., Shults, R.A., Sleet, D.A., Barrios, L.C., & Compton, R. (2005). Effectiveness of school-based programs for reducing drinking and driving and riding with drinking drivers: a systematic review. *American Journal of Preventive Medicine, 28*, 288-304.

Faes, F., & Shamburg, Z. (2009). *Lokaal alcoholbeleid. Resultaten quickscan.* Utrecht: Centrum voor Criminaliteitspreventie en Veiligheid.

Goldenbeld, C. & Houwing, S. (2001). *De rijvaardigheid en trainbaarheid van jonge verkeersdeelnemers.* R-2001-16. SWOV, Leidschendam.

Goodstadt, M. S., Sheppard, M. A., & Chan, G. C. (1982). An evaluation of two school-based alcohol education programs. *Journal of Studies on Alcohol, 43*, 352-369.

Grant, J.D., Scherrer, J.F., Lynskey, M.T., Lyons, M.J., Eisen, S.A., Tsuang, M.T., True, W.R., & Bucholz, K.K. (2006). Adolescent alcohol use is a risk factor for adult alcohol and drug dependence: evidence from a twin design. *Psychological Medicine, 36*(1), 109-118. Doi: 10.1017/S0033291705006045

Hasselt, N. (2010). Preventie van schadelijk alcoholgebruik en drugsgebruik onder jongeren. Utrecht: Trimbos Institute

Heemskerk, M., van den Brink, M., Steenhuis, I., de Boer, M., & Breebaart, G. (2011) 'Alcohol een ander verhaal', een gecontroleerde effectevaluatie op de basisschool. *tsg jaargang 89*(3), 159-165

Hibell, B., Guttormsson, U., Ahlström, S., Balakireva, O., Bjarnason, T., Kokkevi, A., & Kraus, L. (2011). *The 2011 ESPAD Report. Substance Use among Students in 36 countries.* Stockholm: CAN

Hutchinson, L. (1999). Evaluating and researching the effectiveness of educational interventions. *British Medical Journal, 318*(7193), 1267-1269

Hoyle, R.H., Stephenson, M.T., Palmgreen, P., Pugzles Lorch, E., & Lewis Donohew, R. (2002). Reliability and validity of a brief measure of sensation seeking. *Personality and Individual Differences, 32*, 401-414

Jepson, R.G., Harris, F.M., Platt, S., & Tannahill, C. (2010). The effectiveness of interventions to change six health behaviours: A review of reviews. *BMC Public Health, 10*, 538-553.

Jones, L., James, M., Jefferson, T., Lushey, C., Morleo, M., Stokes, E., Sumnall, H., Witty, K., & Bellis, M. (2007). *A review of the effectiveness and cost-effectiveness of interventions delivered in primary and secondary schools to prevent and/or reduce alcohol use by young people under 18 years old.* London: NICE

Koning, I.M., Vollebergh, W.A.M., Smit, F., Verdurmen, J.E.E., Van den Eijnden, R.J.J.M., Ter Bogt, T.F.M., Stattin, H., & Engels, R.C.M.E. (2009). Preventing heavy alcohol use in adolescents (PAS) cluster randomized trial of a parent and student intervention offered separately and simultaneously. *Addiction, 104*, 1669-1678. doi:10.1111/j.1360-0443.2009.02677.x

Mesken, J. (2011). *De evaluatie van verkeerseducatieprogramma's. Aanbevelingen voor effectmeting en een voorstel voor een verkort meetinstrument.* Leidschendam: SWOV Institute for Road Safety Research, The Netherlands

Perry, C.L., & Grant, M. (1991). A cross-cultural pilot study on alcohol education and young people. *World Health Stat Q, 44*, 70-73.

Room, R., Babor, T., & Rehm, J. (2005). Alcohol and public health. *Lancet, 365*, 519-530

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Santor, D.A., Messervey, D., & Kusumakar, V. (2000). Conformity in adolescent boys and girls: Predicting school performance, sexual attitudes and substance

abuse. *Journal of Youth and Adolescence, 29*(2), 163-182.
Shope, J.T., Copeland, L.A., Maharg, R., & Dielman, T.E. (1996). Effectiveness of a high school alcohol misuse prevention program. *Alcoholism: Clinical and Experimental Research, 20*(5), 791-798
Spector, P.E. (1992). *Summated Rating Scale Construction.* Thousand Oaks, CA: Sage.
Spoth, R., Greenberg, M., & Turrisi, R. (2008). Preventive interventions addressing underage drinking: State of the evidence and steps toward public health impact. *Pediatrics 121*(4), S311-S336 Doi: 10.1542/peds.2007-2243[E]
SWOV factsheets: Young drivers and their Young passengers. February 2012. Leidschendam: SWOV Institute for Road Safety Research, The Netherlands
SWOV factsheet: Young novice drivers. November 2012. Leidschendam: SWOV Institute for Road Safety Research, The Netherlands
SWOV factsheet: Risky traffic behaviour among Young adolescents. August 2012. Leidschendam: SWOV Institute for Road Safety Research, The Netherlands
Ter Huurne, E. (2006). *Op tijd voorbereid. Een onderzoek naar het gebruik van e-learning bij genotmiddelenpreventie voor het basisonderwijs.* Enschede: Universiteit Twente
Tobler, N.S., Roona, M.R., Ochshorn, P., Marshall, D.G., Streke, A.V., & Stackpole, K.M. (2000). School-based adolescent drug prevention programs: 1998 Meta-analysis. *The Journal of Primary Prevention, 20*(4), 275-336
Tweede Kamer, (2008). *Kamerstukken, vergaderjaar 2007-2008, 27 565,* nr. 35.
Tweede Kamer, (2013). *Kamerstukken, vergaderjaar 2012-2013*, 33 341, nr. 7.
Twisk, D.A.M., Vlakveld, W.P., & Commandeur, J.J.F. (2007). *Wanneer is educatie effectief?* Leidschendam: SWOV Institute for Road Safety Research, The Netherlands
Valkenberg, H. (2012). *Alcoholvergiftigingen en ongevallen met alcohol bij jongeren van 10 tot en met 24 jaar.* Amsterdam: Stichting Consument en Veiligheid
Van den Berg, M., & Schoemaker, C.G. (2010). *Effecten van preventie. Deelrapport van de Volksgezondheid Toekomst Verkenning 2010 Van gezond naar beter*. Bilthoven: Rijksinstituut voor Volksgezondheid en Milieu.
Van der Vorst, H., Engels, R.C.M.E., Meeus, W., Dekovic, M., & Van Leeuwe, J. (2005). The role of alcohol-specific socialization in adolescents drinking behaviour. *Addiction, 100,* 1464-1476. doi:10.1111/j.1360-0443.2005.01193.x
Van Dorsselaer S., Zeijl E., Van den Eeckhout S., Ter Bogt T., & Vollebergh, W. (2007). HBSC 2005: gezondheid en welzijn van jongeren in Nederland [Health Behaviour in School-aged Children 2005: Young People's Health and Well-Being in the Netherlands]. Utrecht: Trimbos-Instituut; 2007.
Van Hoof, J.J. (2010). *Sweet sixteen and never been drunk? Adolescent alcohol use. Predictors and Consequences.* Enschede, the Netherlands: University of Twente
Verdurmen, J., Monshouwer, K., Van Dorsselaer, S., Lokman, S., Vermeulen-Smit, E., & Vollebergh, W. (2011). *Jeugd en Riskant Gedrag. Kerngegevens uit het Peilstationsonderzoek scholieren.* Utrecht: Trimbos Institute
Vet, R., & van den Eijnden, R. (2007). *Het gebruik van alcohol door jongeren en de rol van ouders: Resultaten van twee metingen.* Woerden: Nationaal Instituut voor Gezondheidsbevordering en Ziektepreventie (NIGZ).
VWS, Ministerie van Volksgezondheid, Welzijn en Sport. (2005). Beleidsbrief Alcohol en jongeren. Den Haag: VWS.
Werch, C.E. & Owen, D.M. (2002). Latrogenic effects of alcohol and drug prevention programs. *Journal of Studies on Alcohol, 63*(5), 581-590.
Wormington, S.V., Anderson, K.G., Tomlinson, K.L., & Brown, S.A. (2013). Alcohol and other drug use in middle school: The interplay of gender, peer, victimization, and supportive social relationships. *Journal of Early Adolescence, 33*(5), 610-234.