Serving alcohol to pseudo-intoxicated guests in bars:

designing the most reliable protocol for utilization in The Netherlands

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Abstract

Introduction and aims: Excessive alcohol consumption is a problem for all ages. Availability of alcohol plays an important role with this. Previous research showed that actors in bars, who pretended to be obviously intoxicated guests, were served alcohol in most purchase attempts, despite existing laws that prohibit this service. This study examined which over serving protocol from previous research is the most reliable to use and gives a first impression of over serving situations in The Netherlands. Design and methods: Two male actors acted as obviously intoxicated guests as they tried to purchase alcohol in 52 bars. Four different protocols were used which examined two independent variables, that are the number of actors present in the bar and the state of intoxication acted out by the actors. An observer was also present to talk with the bar employees after the actors left. **Results:** The pseudo-intoxicated actors were served alcohol in 50 of the 52 purchase attempts. One time service was denied and one time the actor was served a non-alcoholic beer. Not once bar employees thought the pseudo-intoxicated guest was an actor. Secondary factors were not related to the service outcome. **Discussion and conclusions:** The results of this study provide useful insight in over serving situations in The Netherlands despite restrictions of the law and the most reliable protocol used for this kind of research All four protocols were reliable, but to avoid any doubts it is recommended to use the very drunk protocol acted out by one actor.

Keywords: alcohol availability, alcohol intoxication, over serving, responsible alcohol service, catering industry

Introduction

Effects of alcohol consumption are dependent on various factors, such as a person's size, weight, gender and the amount of food consumed [1]. Drunkenness is not only influenced by the blood alcohol level (BAC) but also by the social state of an individual which is divided in behavioural (social, cultural, rules) and physical effects (genes, drinking experiences, specific type and amount of alcohol) [2]. This means that the effects of alcohol consumption differ between individuals. In general, it can be said, that [3-6]:

- the higher the total consumption of alcohol, the higher the chance of damage, and

- the more alcohol is drunk per time, the more serious the physical damage.

Where moderate drinking (refers to a maximum of one or two standard glasses of alcohol for women and two or three standard glasses of alcohol for men per day, with the recommendation to do not drink alcoholic beverages one or two days a week [7]) has both positive and negative effects, excessive alcohol consumption has only negative effects. Table 1 provides a short overview of the diseases and effects related to alcohol use [3].

Effects	Comments
Alcohol use raises risk of:	
Decreased social well-being	
(Un)Intentional Injuries (accidents, suicide)	Criminal behavior, accidents and suicide are related with binge drinking
Neuropsychiatric diseases (depression, alcohol dependence)	Nerve and brain damage occur after long high alcohol consumption
Metabolic diseases (diabetes, obesities)	Low alcohol use diminishes and high alcohol use raises the risk of diabetes II
Cancer (breast, liver, stomach)	Alcohol use has an exceptional relation with liver cancer
Cardiovascular diseases	Low alcohol use diminishes/High alcohol use raises risk of coronary heart diseases: irregular heart rhythm and infarct are related with binge drinking
Diminished resistance	Alcohol can disturb the functions of the immune system
Long diseases	Are linked with alcohol dependence

Loco motor apparatus diseases (fracture, muscular diseases)	High alcohol use raises the risk of muscular diseases
Fertility diseases	
(men and women)	
Alcohol use diminishes risk of:	
Social well-being (pleasure, work)	Moderate alcohol use is related with positive feelings and diminished absence through illness (which is related with alcohol consumption)
Neuropsychiatric diseases (Senile dementia, cognitive functioning)	Some studies show a diminished risk when there is low alcohol consumption
Metabolic diseases (diabetes)	Some studies show a diminished risk when there is low alcohol consumption
Cardiovascular diseases	Diminished risk when drinking two glasses alcohol per day
Loco motor apparatus diseases	Women with low alcohol consumption have stronger bones than total abstainers

Table 1: Diseases and effects related to alcohol use [3]

Excessive alcohol consumption

An international definition of excessive drinking does not exist, but in general, excessive drinkers are women that drink more than one or two standard glasses and men that drink more than two or three standard glasses of alcohol per day [7].

Excessive alcohol consumption is related to various negative effects, as shown in Table 1. The immediate effects of a large amount of alcohol include slurred speech, disturbed sleep, nausea, vomiting and hangovers [1]. Besides these immediate effects, the long term effects can be fatal for an individual. The fact that there exist diseases fully attributable to alcohol, such as alcoholic psychoses, alcohol-dependence syndrome and alcoholic polyneuropathy, show the negative side of excessive alcohol consumption. It can seriously damage the liver, stomach, brain and heart. Women who drink more than two glasses of alcohol per day might have a higher risk of breast cancer. Short-term memory can as well be affected by heavy drinking, which can lead to the Korsakov syndrome [7]. In addition, pregnant women who drink alcohol may give birth to infants with a fatal alcohol syndrome (FAS) [8]. Furthermore, excessive drinking can not only damage the individual itself but also other people due to traffic accidents [9], aggression in the streets [10, 11], child abuse and marriage

problems [3].

Excessive drinking turns into problem drinking when this involves various physical and social problems. In addition, research indicates that children of alcoholic parents are at greater risk of becoming alcoholics than other children, and the younger children start drinking, the higher the chance of an addiction in the future [1, 12, 13].

The availability of alcohol

The easy availability of alcohol for under aged youth is shown to be an important predictor for alcohol consumption [14]. Many countries have various restrictions on the sale of alcohol, covered by the type of retail establishments that can sell alcohol beverages, licensing (such as limits on hours and days of sale and regulations on vendors and the density of outlets) and the age of consumers [15]. This last restriction varies between countries: for example, in the USA the legal age limit is 21 years old, whereas the legal age limit in Denmark and Australia is respectively 16 and 18 years old [16]. The minimum age limit for obtaining alcohol in combination with strong enforcement has shown to be promising in reducing the incidence of drink-related harm among younger people [17]. Nevertheless this enforcement is lacking in various countries, as a result of which a majority of under aged drinkers can obtain alcohol at commercial stores [18-21]. Besides drinking alcohol by under aged youth, excessive alcohol consumption is a problem for all ages. Also for this matter availability of alcohol is an important factor. When one reaches the legal age limit, one can obtain and consume alcohol freely, because it is approved by the law.

This study focuses on the situation in The Netherlands. Therefore it is interesting to know which rules the Dutch government handles for a justified method of alcohol providing. Since the sixties there is an increasing availability of alcohol in The Netherlands. A recent study demonstrates that 82% of the Dutch population of twelve years and older consume alcoholic beverages occasionally and that most of the youth start drinking when they are between eleven and fourteen years old [22]. The same study shows that ten percent of the Dutch population struggles with alcohol problems and that hospital intakes with alcohol as a main diagnosis increased with one third between 1996 and 2004 [22]. To

avoid that people, who reached the legal age limit of obtaining alcohol, can obtain and drink alcohol as much as they would like, there is the Dutch Alcohol Licensing and Catering Act.

Alcohol legislation in The Netherlands

The Alcohol Licensing and Catering Act is engaged in the use and abuse of alcohol. It states that [23]: - all managers should own sufficient knowledge and insight about social hygiene (section of the law 8, paragraph 4)

there is a legal age limit for providing alcohol (under the age of 16 no alcohol and under the age of 18 no strong alcohol drinks) (section of the law 20, paragraph 1)

- it is forbidden for an adult to purchase alcohol for an under aged individual (section of the law 20, paragraph 2)

it is forbidden to allow intoxicated people in the own establishment (section of the law 20, paragraph7)

- it is forbidden to provide alcohol if this could cause any trouble (section of the law 21).

Secondly, the Dutch penal code (section of the law 252) states that a person can be punished by imprisonment of nine months or a fine of the third category, when:

- he provides alcohol to an intoxicated person

- he intoxicates a child under the age of 16

- he forces someone by violence or threatening to consume alcohol.

Final, the Dutch catering industry created a code of conduct for self-regulation which states that it is forbidden to provide alcohol to an intoxicated person and it is forbidden to provide alcohol when this could cause any trouble. Furthermore, bar employees should react reserved when a guest requests unlimited pouring [24].

Research in The Netherlands

Research abroad (USA and Australia) showed a gap between the legal age limit for obtaining alcohol and the enforcement on this legislation [19-21]. Also in The Netherlands there is little compliance with this act concerning the age limit of providing alcohol; 87% of the purchase attempts by under aged adolescents, using the research method mystery shopping, were successful in Dutch supermarkets and liquor stores [18]. This means that also in The Netherlands there is a gap between the legal age limit and the enforcement, which results in the fact that under aged adolescents have easy access to alcohol and therefore can consume alcohol before they reach the legal age. It is possible that there is not only a gap concerning the legal age limit of obtaining alcohol, but also concerning other rules of the Alcohol Licensing and Catering Act and the penal code, for example the rule not to provide alcohol to and admit an intoxicated person in the own establishment. Considering this, it is interesting to examine the compliance of the catering industry according the section of the law which prohibits providing alcohol to an intoxicated person. This is done by means of the research method mystery shopping.

Mystery shopping is a specific research method; trained individuals are used to practice and measure any customer service process, while they act as possible customers and afterwards report their experiences in an objective way [25]. The main benefit of this method, compared to other research methods, is the competency to measure the provided service quality, more than the knowledge, attitudes or self-reported behavior of providers themselves because these might be "socially colored" [26].

In various countries (Canada, Sweden and the USA) the phenomenon over serving (providing alcohol to an already intoxicated person) already has been examined [27-34]. Large differentiation exists among the percentages of over serving, varying from 32% in the USA [30] to 53% [31] and 95% in Sweden [32]. These studies in general use the same mystery shopping method, that is hiring actors and train them to feign intoxication in bars in an attempt to order more alcohol, but they differ on various features. This study will give an overview of these different protocols with the purpose to find the most reliable protocol for utilization in The Netherlands. Furthermore, it will give a first impression of the actual state of over serving situations in The Netherlands.

Over serving protocols

Table 2 shows the different studies and their features. Some of the studies included a bar personnel training to see whether bar employees would serve alcohol to intoxicated guests after they had participated in a responsible beverage service training [27, 28, 31, 32]. Because drunkenness is not

	Gliksman McKenzie, Single, Douglas, Brunet, Moffatt (1993)	Mc Knight & Streff (1994)	Toomey, Wagenaar, Kilian, Fitch, Rothstein, Fletcher (1999)	Wallin, Girpenberg & Andréasson (2002)	Andréasson, Lindewald & Rehnmann (2000)	Lenk, Toomey & Erickson (2006)	Toomey, Wagenaar, Erickson, Fletcher, Patrek, Lenk (2004)
Country of research	Canada	USA	USA	Sweden	Sweden	Unknown	Unknown
# bars visited	8	60	24	103	92	231	123
Bar personnel training	Yes	Yes	No	Yes	Yes	No	No
# actors hired	Unknown	2 or 3	3	6	2	14	19
Gender of actors	Unknown	Male	Male	Male	Male	7 males, 7 females	Male
Age of actors	25 - 40	21 - 25	30 - 44	± 25	23 - 27	21 - 64	31 - 59
Training actors	Script + improvisation	Best scene	Role-playing + panel	Scene from [25]	Best scene (panel)	Training + best actors (panel)	Training + best actors (panel)
# actors in bar	2	1	1	2	2	1	1
# observers in bar	2	1	1	2	0	1	1
Days of visit	Tuesday + Wednesday	Weeken ds	Thursday - Saturday	Unknown	Tuesday - Saturday	Unknown	Friday + Saturday

Table 2: Overview of features of over serving protocols

only influenced by the blood alcohol level but also by the social state of an individual [2], it sometimes can be difficult for a bar employee to estimate whether the guest is intoxicated. Bar employees try to estimate whether the guest is intoxicated by identifying the following factors: disordered speech, bothering other guests, amount of drinks served and clumsiness. Disordered speech and clumsiness have the highest correlation; bar employees follow these factors more than an objective measure such as the amount of drinks [35].

The age of the, mostly male, actors varied between 21 and 64 years old. All actors were trained, by the researchers or a theatre consultant [27]. Sometimes a panel of policemen and bar employees decided which actor and/or which scene was best for implementation [30, 32-34]. The number of

actors visiting the bars differed between one [28, 30, 33, 34] and two [27, 31, 32]; the number of observers visiting bars differed from zero to two. The way the actors acted as an intoxicated guest also varied between studies. Some studies included acting drunk on the streets to test the door policy [30, 33, 34] or studied the difference between ordering beverages with a high and low alcohol percentage [30]. Some studies included two order rounds [30], but most involved one order round [27, 28, 31-34]. The drunken behavior itself differed from slurred speech and staggering to the bar [30] (both are related to two important factors bar employees use to assess the intoxication of a guest, that is disordered speech and clumsiness [35]) to act overfriendly towards the bar employee, drop money on the floor [32] and falling halfway asleep [31].

The reasoning behind the decisions of these over serving study protocols are not mentioned, but it is useful for further research to know which protocol is the most reliable to use in The Netherlands. In this study we will focus for one thing on the number of actors involved, because one drunken guest (i.e. the actor) all by himself in a bar might not be very realistic, while on the other hand it is cost saving in comparison with two actors. Also, the level of intoxication performed by the actor is chosen to study, because it is important to know for further research which acting method is the most reliable for this kind of research. The main question of this study can be worded as: *Which protocol of over serving intoxicated guests in bars is the most reliable to use in The Netherlands?*

Furthermore, the following questions will also be examined:

- Which number of actors is the most reliable to use for this kind of research?

- Which way of acting drunk is the most reliable to use for this kind of research?

- What is the first impression on over serving situations in the Netherlands?

Methods

In this study hired actors were instructed to feign intoxication in 52 bars in an attempt to order more alcohol. The purpose was to find out which protocol was best for utilization in The Netherlands, and to give a first impression of the actual state of over serving in The Netherlands. Also the actions of bar employees were examined.

Design

To find out which protocol was best for utilization in the Netherlands two important variables were compared, that is the number of actors involved and the level of intoxication. Table 2 already showed several studies about over serving, but showed differences among others in the number of actors involved. However, the studies did not explain the number of actors chosen. They could have chosen two actors because it is not very realistic when one guest stands alone drunk in a bar. On the other hand it would be cost saving if this research could be carried out with the use of one actor instead of two. The level of intoxication performed by the actor was chosen to study, because the foreign studies also differed in ways of acting intoxicated and it was not clear which acting method was the most realistic and reliable for this kind of research. It is interesting to know for further research to what extent an actor could play the role of an intoxicated guest, in a way that it was very clear to a bar employee that the guest was intoxicated, but without him knowing the guest is in fact an actor. Because it was not very realistic when two guests (i.e. actors) are in a bar and one of them is intoxicated person, play the role of his tipsy friend. The 2 x 2 design used in this study is presented in table 3 and shows that there were four protocols examined.

State of intoxication	Number of actors		Total
	One actor	Two actors	
Middle drunk	N = 13	N = 13	26
Very drunk	N = 13	N = 13	26
Total	26	26	52

Table 3: Design (N = number of purchase attempts in a bar)

Actor recruitment

Because previous research showed that working with actors as pseudo patrons is a good way to examine over serving in bars [27, 28, 30-34], the use of actors was also adopted in this study. Different theatre groups were contacted and finally two male actors at the age of 22 and 25, who both

studied at the Academy for Drama, were willing to participate. The actors attended a training session of four hours, lead by a theatre director. The actors learned how to act as an intoxicated guest and rehearsed the different protocols. This training took place in a youth centre with a bar to practice in a realistic situation. The four scripts belonging to each protocol were initially based on scripts from other studies [30, 31, 33, 34]. During the training the scripts were adjusted to practice and feasibility.

Pre-testing the protocols

To make sure that bar employees would notice the difference between the middle drunk and very drunk protocol, a panel, consisting of seven bar employees and three policemen who often deal with intoxicated people, was asked to answer questions about the state of intoxication. Using a panel has been successfully applied in other studies [30, 32-34]. Two videos were made of one actor (for homogeneity in the answers) by taping both the middle drunk and the very drunk version. Both videos were randomly showed to the panel members. They were asked to tell what attracted their attention about the behavior of the bar patron. They did not know anything about the aim of the study or that the bar patron was in fact an actor. If a panel member answered that the bar patron was intoxicated, the researcher asked the member to rate the level of intoxication on a scale from 1 to 5 (1 being slightly intoxicated and 5 being very intoxicated). Eight out of ten panel members were convinced that in the middle drunk version the person was middle drunk and in the other version he was very drunk. Not one panel member claimed that one of the videos showed a light drunken bar patron.

Alcohol establishments

The study was conducted in two medium sized cities in a southern province of The Netherlands. Seventy three bars were selected using the Yellow Pages, all located in the centre of the cities. During the implementation of the study 21 of these bars were eliminated from the results, because:

- the actor and observer could not find the establishment (2);
- the establishment did not exist anymore (7);
- the situation was not safe (2);
- the establishment was a grand café (1);
- the establishment had older guests (3); or

- the actor was refused entrance by doorkeepers who thought he was too intoxicated (6) (see discussion section).

Like previous research, the bars were visited on Thursday-, Friday- and Saturday evenings (known as nights to go out), between 09.30 P.M. and 2 A.M. On average 9 bars were visited per evening and each visit, including filling in surveys, took approximately 30 minutes.

Main field research

Throughout the evenings when the study was conducted one or two actors and the observer formed a team. By then, the actor was informed which bars he would visit that evening. One attempt was made at every listed establishment. The basic script for the four protocols went as follows: first the observer entered the bar, sat down at the bar with some room next to her and ordered a nonalcoholic beverage. Meanwhile, the guest (i.e. the actor) acted drunk outside the bar to test the doormen. When the guest entered the bar, he found a spot nearby the observer. He portrayed intoxicated behavior and when he was sure the bartender had seen him long enough, he ordered a draught beer. After the bartender served the beer, the guest left the bar leaving his drink behind or, when the bartender did not serve the beer, the guest left the bar quietly. Then, the observer asked if the bartender remembered the guest that just left (i.e. the actor) and whether the guest was intoxicated. After this, the observer also left the bar, met the actor outside and both filled in the questionnaires. The observer could always intervene in case of an emergency; this never proved to be necessary. When there were two guests (i.e. actors) involved, two beers were ordered instead of ordering a non-alcoholic beverage besides a beer, because this last order might create doubts if the beer was for the drunken guest or his friend.

Table 4 shows the differences between the middle drunk and the very drunk protocol. Summarized, the very drunk version followed the same protocol as the middle drunk version except the actor's actions were slower and clumsier and his speech was more bewildered and thickly spoken in the very drunk version. The difference between the numbers of actors was situated in the fact that the extra actor emphasized the intoxicated behavior outside and inside the bar by asking his intoxicated friend if he was doing alright or if they better should go home.

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Middle & Very drunk protocol (same actions for both protocols)	Only middle drunk protocol	Only very drunk protocol		
Put red make-up on actor's cheeks	-	-		
-	-	Put tiger balm under actor's eyes		
-	-	Actor's hair looks sloppy		
Actor and observer walk separately to the bar	-	-		
Observer enters the bar and finds a spot	-	-		
Observer orders a nonalcoholic beverage	-	-		
Observer pays the drink	-	-		
-	Actor walks a bit out of balance outside	Actor walks unbalanced outside		
Actor enters the bar	-	-		
-	Actor staggers to the bar	Actor slowly staggers to the bar		
Actor hangs on the bar	-	-		
Actor leans on elbow after which elbow falls from bar	-	-		
-	Actor grabs his wallet	Actor slowly grabs his wallet		
Actor drops his wallet	-	-		
-	Actor picks up wallet	Actor slowly picks up wallet		
-	-	Actor talks to himself, confused, thickly spoken		
Actor attracts attention bartender	-	-		
-	Actor slowly asks a question	Actor slowly asks a question, thickly spoken		
Actor falls away shortly	-	-		
-	Actor slowly asks what the bartender just said	Actor slowly asks what the bartender just said, thickly spoken		
-	Actor falls away shortly	Actor falls away a bit longer		
-	Actor orders a beer	Actor orders a beer, thickly spoken		
Actor muddles with his wallet	-	-		

Actor pays his drink	-	-
Actor pretends to sip the drink	-	-
Actor leaves the bar	-	-
Observers asks bar employee some questions	-	-
Observer leaves the bar	-	-
Actor and observer meet out of sight of the bar to fill in questionnaires	-	-

Table 4: Differences middle drunk and very drunk protocol

Instruments

Two questionnaires were used in this study; one was filled in by the actor and one by the observer.

The actor questionnaire was based on an existing questionnaire from the National Institute on Alcohol Abuse and Treatment [36]. This questionnaire focused mainly on the alcohol ordering outcome (service or no service) and the behavior of the bartender. The behavior of the bartender was divided in:

- service without comment (yes/no),
- ask for the state of intoxication (yes/no),
- offer an alcohol-free beverage (yes/no),
- delay service (yes/no),
- recommend not driving a car (yes/no),
- consult other personnel (yes/no),
- refuse service (yes/no), or
- something else.

The observer questionnaire was partly based on the questionnaire from the National Institute on Alcohol Abuse and Treatment [36] and partly on other questionnaires [31, 32]. The observer questionnaire mainly gave information about the reliability of the actor's performance by asking the bar employee if he remembered the guest that just left and if he thought the guest was intoxicated. The quality of the actor's performance was also controlled by perceptions of the observer, who gave feedback when necessary. The observer also registered the types of bar visited.

There was some overlap between the two questionnaires by the following questions:

- Was there a doorman in front of the bar (yes/no)?

- What is the gender of the bartender (male/female)?

- What is the estimated age of the bartender (<20 years/21-30 years/31-40 years/41-50 years/51-60 years/>61 years)?

- What is the estimated amount of other guests in the bar (0-20 guests/21-50 guests/51-100 guests)?

- What is the estimated age of other guests in the bar (<20 years/21-30 years/31-40 years/41-50 years/51-60 years/>61 years)?

- Did you deal with more than one bartender (yes/no)?

- Do you think the bartender found the performance conspicuous (yes/no)?

There was more than substantial agreement between the answers of the observer and the answers of the actor as the mean Cohen's Kappa of 0.90 shows (CK's ranging between .708 and 1.0).

Results

Overall results

During the visits the percentage men and women working as bar employees was approximately the same (respectively 51,9% and 48,1%). The estimated age of the majority of the bar employees was between 21 and 30 years old (63,5%) and the estimated age of the other guests also was between 21 and 30 years old (65,4%). Most bars visited were popular bars (59,6%) or pubs (30,8%) and were not very crowded (0 to 20 persons (63,5%)). Standard multiple logistic regression shows that neither the estimated age and gender of the bar employee, nor the estimated number and age of the remaining guests, nor the type of bar was significantly related to the service outcome ($r^2 = -.035$, p = .661).

The guests (i.e. the actors) were served alcohol in 50 of the 52 purchase attempts. One time service was denied because the bar employee told the guest he did not serve intoxicated guests and one time the guest was served a non-alcoholic beer (noticed by the observer). In the last case the bartender at first tapped a beer, but reconsidered the situation and decided to serve the guest a non-

alcoholic beer, without the guest knowing he got a non-alcoholic beer.

When the observer asked the bar employees if they remembered the guest that just left, they confirmed that they remembered the guest in 80,8% of the visits. When the observer asked them if they thought the guest was intoxicated, the bar employees were convinced that the guest was intoxicated in 73,1% of the visits, although twice a bartender said he thought the guest had an physical impairment. Not once a bar employee told the observer he thought the guest was acting. When the observer spoke with the bar employees some comments were repeated by different bar employees, such as "Ah well, he has paid his drink" or "It occurs frequently that guests are as drunk as him and order an alcoholic beverage". One time the actor got a beer while the bar employee said "Is it not better for you to drink a coke?" Once a bartender himself was very drunk, therefore the observer decided to leave the bar, because of an unsafe situation. Table 5 gives an overview of the results.

	One	One	Two	Two	Total
	actor	actor	actors	actors	
	Middle drunk	Very drunk	Middle drunk	Very drunk	
	(n = 13)	(n = 13)	(n = 13)	(n = 13)	(n = 52)
Sex of bar employee					
Male	5	9	4	9	27
Female	8	4	9	4	25
Estimated age bar employee					
< 20	1	0	1	0	2
21 - 30	8	11	8	11	38
31 - 40	3	1	0	1	5
41 - 50	1	1	2	1	5
51 - 60	0	0	1	0	1
> 60	0	0	1	0	1
Estimated amount remaining guests					
0 - 20 pers.	7	8	10	7	32
21 – 50 pers.	2	4	1	1	8
51 - 100 pers.	3	1	2	5	11
> 100 pers.	1	0	0	0	1
Estimated age of guests					
< 20	1	1	1	3	6
21 – 30	9	7	8	8	32
31 - 40	3	4	2	2	11
41 – 50	0	1	1	0	2
51 - 60	0	0	1	0	1

> 60	0	0	0	0	0
Type of bar					
Pub	3	5	5	3	16
Disco/Club	2	0	0	1	3
Dart cafe	1	0	0	0	1
Popular bar	7	8	7	9	31
Something else	0	0	1	0	1
Presence doorkeeper					
Yes	3	2	5	7	17
No	10	11	8	6	35
Alcohol service					
Yes	13	13	13	11	50
No	0	0	0	2	2
First reaction bar employee					
Service without comment	12	12	11	12	47
Ask for the state of intoxication	0	0	1	0	1
Offer an alcohol-free beverage	0	0	1	0	1
Delay service	0	0	0	0	0
Recommend not driving a car	0	0	0	0	0
Consult other personnel	1	0	0	0	1
Refuse service	0	0	0	1	1
Something else	0	1	0	0	1
Second reaction bar employee					
Service without comment	13	13	12	11	49
Ask for the state of intoxication	0	0	1	0	1
Offer an alcohol-free beverage	0	0	0	1	1
Delay service	0	0	0	0	0
Recommend not driving a car	0	0	0	0	0
Consult other personnel	0	0	0	0	0
Refuse service	0	0	0	0	0
Something else	0	0	0	0	0
Remembrance of guest by bar employee					
Yes	7	13	11	11	42
No	2	0	1	0	3
Something else	4	0	1	2	7
Bar employee thinks guest is intoxicated					
Yes	8	11	10	11	40
No	0	0	0	0	0
Employee did not remember the guest	1	0	0	0	1
Employee did not remember the situation	0	0	1	0	1
Employee did not had time to talk	0	1	0	0	1
Something else	4	1	2	2	9

Table 5: Overview results

Results variable 'number of actors'

One guest always got beer served, whereas the protocol with two guests resulted in two refusals (that is entire service refusal and serving a non-alcoholic beer). When the observer asked the bar employees if they remembered the guest or guests that just left, the bar employees remembered him/them in respectively 76,9% and 84,6% of the visits. When the observer asked the bar employees if they thought the guest or guests were intoxicated, they were convinced that he was intoxicated in respectively 65,4% and 80,8% of the visits, although twice a bartender thought the guest (i.e. one actor) had an physical impairment.

Results variable 'state of intoxication'

Female bar employees were more present during the performance of the middle drunk protocol (65,4%) and male bar employees were more present during the performance of the very drunk protocol (69,2%). The guest always got beer served during the middle drunk protocol, whereas the very drunk protocol resulted in two refusals (that is entire service refusal and serving a non-alcoholic beer). When the observer asked the bar employees if they remembered the guest that just left, they remembered them for the middle drunk protocol in 69,2% of the visits and for the very drunk protocol in 92,3% of the visits. When the observer asked the bar employees if they remembered if they guest was intoxicated, they were convinced that he was intoxicated for the middle drunk version in 61,5% of the visits and for the very drunk version in 84,6% of the visits. In both versions one time a bar employee thought the guest had an impairment.

Cross results 'number of actors' and 'state of intoxication'

The two refusals (the entire service refusal and serving a non-alcoholic beer) occurred when there were two guests involved while acting very drunk. After one guest acted the middle drunk version, bar employees could not remember the guest as good as after the other protocols, but still a majority was sure they remembered the guest and thought he was intoxicated (respectively 53,8% and 61,5%).

Discussion

Although the results of this study cannot be generalized, it provides useful insight into serving alcohol

to intoxicated guests in The Netherlands and the protocol used for this kind of research. The majority of the purchase attempts made by the pseudo-intoxicated actors resulted in a sale (50 of 52 purchase attempts) despite the laws which make this sort of service illegal. This high outcome is comparable to previous research [32, 34]. It shows that there is practically no compliance to the Dutch law concerning the prohibition of over serving to intoxicated guests. Besides alcohol availability for under aged youth in supermarkets and liquor stores [18] (known is that those who start drinking at a young age are at higher risk of addiction to alcohol in the future [12, 13]), there is also alcohol availability for the individual itself and other individuals [1, 3, 9-11], it is recommended not to drink more alcoholic beverages when one is already intoxicated.

There were no large differences concerning the number of actors that influenced the service outcome. However, one issue is that when an actor was alone, he always got beer served, while in the protocols with two actors they got refused service two times. This distinction is hard to underpin, but bar employees may use 'cause trouble' as a reason to refuse service: one person will not cause trouble as quick as two persons when one is intoxicated. One bar employee thought the intoxicated guest felt broken hearted, as a reason for drinking so much, and felt sorry for him: this kind of compassion could also be a reason to serve the intoxicated guest. Another issue is that when the actors were together they were refused six times by doorkeepers, while in the protocol with one actor no refusal at the door occurred. The 'cause trouble' reason, this time made by the doorkeeper, may also affect this outcome. Also, the actors were more at ease when they were together: they performed the same as when they were alone but they felt more secure together.

There were no large differences concerning the state of intoxication that influenced the service outcome. However, in the very drunk protocol the actors were refused entrance six times and refused service inside the bar two times, whereas with the middle drunk protocol there were no refusals. Twice a bartender said he thought the guest had a physical impairment. Also, the very drunk behavior was more recognized as drunk behavior (84,6%) in comparison with the middle drunk behavior (61,5%), but still a majority thought the guest was intoxicated. This distinction raises the question "What is drunkenness?" Research showed that drunkenness is not only influenced by the blood

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alcohol level but also by the social state of an individual [2], which means that the effects of alcohol consumption differ between individuals and it makes it difficult for bar employees to estimate whether the guest is intoxicated [35].

All four protocols give good insight in over serving intoxicated guests in bars, but to avoid all doubts about whether the guest is intoxicated or not, it is advised to use the very drunk protocol. Also is advised to use one actor to avoid the "causing trouble"-reasoning. Besides that, it is also cost saving.

Further research should also use an observer during the visits. The observer can give the actor appropriate feedback, controls if everything goes according the protocol and can intervene in case of an emergency. Moreover, the observer can talk with the bartender to get more insight in the bartender's behavior.

Some explanations for the great percentage of over serving might be: financial reasons ("Ah well, he has paid his drink"), lack of knowledge of the law by bar employees, lack of training bar employees, bar employees do not care ("This happens all the time") or the lack/height of sanctions. Sometimes the bar employee was too busy with other tasks to notice the intoxicated behavior. It could be effective to oblige managers that all bar employees should follow a responsible beverage service training, to explain the law about over serving and raise awareness of the negative effects of excessive drinking. Some studies showed an improvement in alcohol service [27, 37, 38]. A real interview with bar employees could give more information about the actual thoughts behind the server's behavior. Sometimes guests in the establishment made comments to each other about the intoxicated behavior of the actor. These cases indicate that when the intoxication level was not noticed by the bar employee, this was not due to the actor's performance.

Because at this moment there is no enforcement of the law which prohibits over serving to intoxicated guests in The Netherlands, bar employees might not know there is a law concerning this subject or they do not care. Through inspections by police or employees from the Food and Consumer Product Safety Authority, the law can be brought under attention of bar employees and managers. Strong enforcement has shown to be promising in reducing the incidence of drink-related harm among younger people [17].

This study shows some compliance to the Dutch Alcohol Licensing and Catering Act concerning

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the six refusals by doorkeepers ("it is forbidden to allow intoxicated people in the own establishment" (section of the law 20, paragraph 7)) [23]. Nonetheless, this does not imply that over serving inside the establishment does not occur. Further research should also visit these establishments at another moment, without acting intoxicated outside the bar, to see if over serving occurs inside the establishment. Another notable matter was that when the actors were refused entrance one night at a particular club, the next evening they were refused at another club by the same doorkeeper. The doorkeeper remembered the two guests and made a comment about the intoxicated behavior. Further research should also divide the amount of doorkeepers per protocol, because now the very drunk version with two actors had a larger amount of doorkeepers (i.e. thirteen including the six refusals) than the other protocols (approximately four).

The actor training under the direction of a theatre director was very important for the selfconfidence of the actors. Because of the real life situation it is important to practice the behavior before the first visit.

Secondary factors, such as estimated age of bar employee and other guests, were rated by the actor as well as the observer, which raises the reliability of the estimations made, shown by the mean Cohen's Kappa of 0.90. Further research should follow this example for a higher reliability of the answers. Secondary factors did not influence the service outcome, this in contrary to another study [31]. This could be explained by the small sample size.

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Appendices

Appendix I: Actor questionnaire

- 1. Naam bezochte horecagelegenheid: _____
- 2. Datum: / /
- 3. Tijd van bezoek: ____: ___:
- 4. Naam acteur: _____

Portier aanwezig voor kroeg: ja / nee

5. Was u in staat in deze horecagelegenheid het gehele experiment uit te voeren (d.w.z. van het binnenkomen tot het pand verlaten nadat er wel/geen drank is geserveerd)? Omcirkel het juiste antwoord.

Ja | Nee [Zo ja, ga naar vraag 9][Zo niet, ga naar vraag 6]

6. Zo niet, waarom niet? Kruis aan wat van toepassing is. [Na het beantwoorden van vraag 6 (en evt. vraag 7 en 8), ga naar vraag 41. Na vraag 41 bent u klaar met de vragenlijst]

- 01. [] Kan de horecagelegenheid niet vinden
- 02. [] De horecagelegenheid bestaat niet meer
- 03. [] De horecagelegenheid is niet open op tijd van het bezoek
- 04. [] Werd geweigerd aan de deur vanwege de pseudo-intoxicatie
- 05. [] De horecagelegenheid schenkt geen alcohol
- 06. [] De situatie is niet veilig [Ga naar vraag 7]
- 07. [] lets anders [Ga naar vraag 8]

7. Leg uit waarom de situatie onveilig was: [Beantwoord hierna vraag 41 en verlaat de vragenlijst]

8. Leg uit waarom iets anders: [Beantwoord hierna vraag 41 en verlaat de vragenlijst]

9. Heeft de horecagelegenheid dezelfde naam zoals deze op uw lijst is aangegeven? Omcirkel het juiste antwoord.

Ja | Nee [Zo ja, ga naar vraag 11] [Zo niet, ga naar vraag 10]

10. Zo niet, wat is de nieuwe naam van de horecagelegenheid?

Binnen de horecagelegenheid: Drank bestellen

11. Was u in staat een drankje te bestellen? Het gaat hierbij niet om de reactie van de barman (bv. weigering) maar of u überhaupt de kans had een drankje te bestellen. Omcirkel het juiste antwoord.

Ja | Nee [Zo ja, ga naar vraag 13] [Zo niet, ga naar vraag 12]

12. Zo niet, waarom niet? [Ga naar vraag 31]

Voor de volgende acht vragen, geef aan:

Wat was de eerste reactie van de barman op uw bestelling?

- **13.** Ja | Nee 1. Ging het drankje halen, zonder commentaar
- 14. Ja | Nee 2. Vroeg mij naar mijn staat van dronkenschap
- 15. Ja | Nee 3. Stelde eten of een alcoholvrij drankje als alternatief voor
- 16. Ja | Nee 4. Vertraagde service met commentaar/conversatie
- 17. Ja | Nee 5. Adviseerde me dat ik niet moest autorijden
- 18. Ja | Nee 6. Haalde de bedrijfsleider of ander personeel erbij
- **19.** Ja | Nee 7. Weigerde service omdat ik dronken was [Ga naar vraag 31]
- 20. Ja | Nee 8. lets anders [Ga naar vraag 21]

21. Omschrijf de andere reactie van de barman:

22. Werd het drankje aan u geserveerd? Omcirkel het juiste antwoord.

Ja | Nee [Zo ja, ga naar vraag 23] [Zo niet, ga naar vraag 31]

Voor de volgende zeven vragen, geef aan:

Wanneer de bestelling geserveerd werd, wat deed of zei de barman toen?

- 23. Ja | Nee 1. Serveerde de bestelling, zonder commentaar
- 24. Ja | Nee 2. Vroeg mij naar mijn staat van dronkenschap
- 25. Ja | Nee | 3. Stelde eten of een alcoholvrij drankje als alternatief voor
- 26. Ja | Nee 4. Vertraagde service met commentaar, conversatie
- 27. Ja | Nee 5. Adviseerde me dat ik niet moest autorijden
- 28. Ja | Nee 6. Haalde de bedrijfsleider of ander personeel erbij
- **29.** Ja | Nee 7. lets anders [Ga naar vraag 30]

30. Omschrijf de andere reactie van de barman:

Binne	en de ho	recagelegenheid: Interactie met de barman						
31.	Hoe q	Hoe gelijk stond uw prestatie aan eerdere prestaties? Kruis maximaal één vakje aan.						
	-] Heel erg gelijk						
		l Gelijk						
	03. [Niet gelijk [Ga naar vraag 32]						
	32.	Wanneer uw prestatie NIET GELIJK was aan eerdere prestaties, kunt u aangeven waarom niet?						
33.		op een schaal van 1 tot 5 aan, waarbij 1 staat voor 'helemaal niet' en 5 voor naal wel', of u het idee had dat de barman uw vertoning enigszins verdacht vond:						
		(helemaal niet) 1 2 3 4 5 (helemaal wel)						
34 .	Had u	te maken met meer dan één barman? Omcirkel het juiste antwoord.						
		Ja Nee [Zo ja, ga naar vraag 35] [Zo niet, ga naar vraag 36]						
	35.	Met hoeveel barmannen had u te maken?						
6.		varen de kosten voor een biertje? € (Wanneer u de kosten niet heeft en achterhalen hier niets invullen)						
37.	of and	Los van de hierboven genoteerde informatie, was er iets in het gedrag van de barman of ander personeel dat erop zou duiden dat zij het nodig vonden in te grijpen? Omcirkel het juiste antwoord.						
		Ja Nee [Zo ja, ga naar vraag 38] [Zo nee, ga naar vraag 39]						
	38.	Omschrijf het gedrag:						
Rinn	an de ho	recagelegenheid: Karakteristieken van de barman						
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39. Geslacht van de barman waarbij u een drankje bestelde:

- 01.[] Man
- 02. [] Vrouw

40. Schat de globale leeftijd van de barman waarbij u een drankje bestelde:

- 01. [] 20 jaar of jonger
- 02. [] 21 30 jaar
- 03. [] **31 40 jaar**
- 04. [] 41 50 jaar
- 05. [] 51 60 jaar
- 06. [] 60 jaar of ouder

Karakteristieken van de horecagelegenheid

41. Schat het aantal gasten aanwezig in de horecagelegenheid

- 01. [] 0 tot 20 personen
- 02. [] 20 tot 50 personen
- 03. [] 50 tot 100 personen
- 04. [] 100 of meer personen

42. Schat de gemiddelde leeftijd van de gasten aanwezig in de horecagelegenheid

- 01. [] 20 jaar of jonger
- 02. [] 21 30 jaar
- 03. [] 31 40 jaar
- 04. [] 41 50 jaar
- 05. [] 51 60 jaar
- 06. [] 60 jaar of ouder

42. Overige opmerkingen:

Einde vragenlijst

Appendix II: Observer questionnaire

- 1. Naam bezochte horecagelegenheid:
- 2. Datum: / /
- 3. Tijd van bezoek: ____: ____:

Portier aanwezig: ja / nee

Binnen de horecagelegenheid: Interactie met de barman

4. Geef op een schaal van 1 tot 5 aan, waarbij 1 staat voor 'helemaal niet' en 5 voor 'helemaal wel', of u het idee had dat de barman de vertoning van de acteurs enigszins verdacht vond:

(helemaal niet) 1 2 3 4 5 (helemaal wel)

- 5. Geef aan hoe de barman reageerde op uw vraag "Zag je die man(nen) net?"
 - 01. [] De barman wist niet wie u bedoelde
 - 02. [] De barman wist wie u bedoelde
 - 03. [] De barman reageerde niet op uw vraag
 - 04. [] De barman zei dat hij geen tijd had om te praten
 - 05. [] lets anders, namelijk
- 6. Geef aan hoe de barman reageerde op uw vraag "Die ene man was wel heel dronken, vond je niet?"
 - 01. [] De barman was het hier mee eens.
 - 02. [] De barman was het hier niet mee eens.
 - 03. [] De barman kon het zich niet meer herinneren.
 - 04. [] De barman wist niet welke man u bedoelde.
 - 05. [] De barman reageerde niet op uw vraag.
 - 06. [] De barman zei dat hij geen tijd had om te praten.
 - 07. [] lets anders, namelijk
- 7. Gaf de barman op een of andere manier aan dat hij niet wist dat het verboden is om aan dronken gasten alcohol te schenken?

Ja | Nee [Zo ja, ga naar vraag 9] [Zo niet, ga naar vraag 10]

•	Hoe g	Hoe gaf hij dit aan? 					
-	Had ι	ı te maken met meer dan één barman? Omcirkel het juiste antwoord.					
		Ja Nee [Zo ja, ga naar vraag 11] [Zo niet, ga naar vraag 12]					
	10.	Met hoeveel barmannen had u te maken?					

11. Wat waren de kosten voor een frisdank? € _____ (Wanneer u de kosten niet heeft kunnen achterhalen hier niets invullen)

Binnen de horecagelegenheid: Karakteristieken van de barman

- 12. Geslacht van de barman waarbij de acteur(s) een drankje bestelde(n):
 - 01.[] Man
 - 02. [] Vrouw
- 13. Schat de globale leeftijd van de barman waarbij de acteur(s) een drankje bestelde(n):
 - 01. [] 20 jaar of jonger
 - 02. [] 21 30 jaar
 - 03. [] 31 40 jaar
 - 04. [] **41 50 jaar**
 - 05. [] 51 60 jaar
 - 06. [] 60 jaar of ouder

Karakteristieken van de horecagelegenheid

14. Wat voor type horecagelegenheid heeft u zojuist bezocht?

- 01.[] Bruin café
- 02.[] Discotheek/Club
- 03. [] Dartcafe
- 04. [] Biljartcafe
- 05. [] Populaire kroeg
- 06. [] lets anders, namelijk ______
- 15. Schat het aantal gasten aanwezig in de horecagelegenheid

- 01. [] 0 tot 20 personen
- 02. [] 20 tot 50 personen
- 03. [] 50 tot 100 personen
- 04. [] 100 of meer personen

16. Schat de gemiddelde leeftijd van de gasten aanwezig in de horecagelegenheid

- 05. [] 20 jaar of jonger
- 06. [] 21 30 jaar
- 07.[] 31 40 jaar
- 08. [] 41 50 jaar
- 09. [] 51 60 jaar
- 10. [] 60 jaar of ouder

17. Overige opmerkingen: ____

Einde vragenlijst