

**How modifiable is behavior? Factors of influence for adherence to provisions to protect minors in the sale of gambling products.**

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- ✓ In 2009, Austrian Lotteries raised the minimum age for the sale of all its products and for all sales partners to 16 years of age
- ✓ Intensive annual responsible gaming training courses
- ✓ Information materials for customers and sales partners
- ✓ Regular mystery shopping checks → escalation path up to termination of the contract by Austrian Lotteries

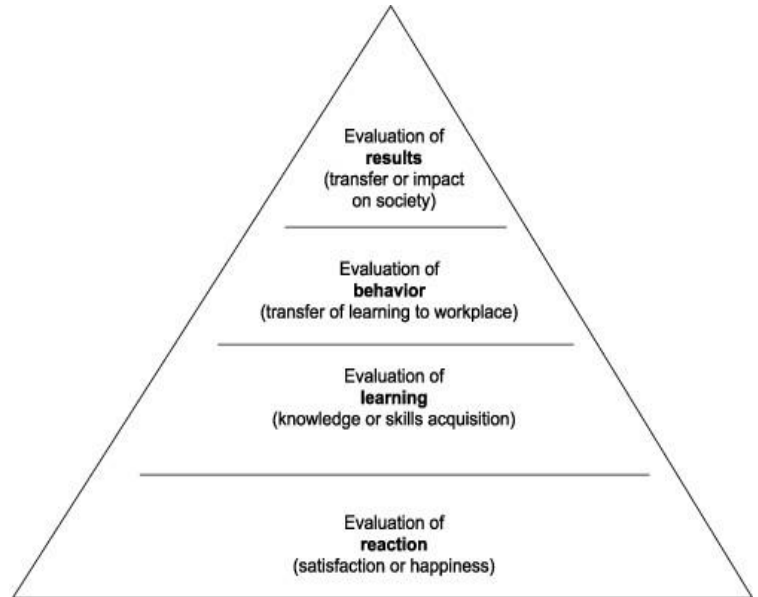
Goal of the study →

- ✓ To identify variables that influence the sale to young test subjects
- ✓ To evaluate the training measures
- ✓ To build the foundations for the content of future RG training courses
- ✓ To furnish proof of compliance by Austrian Lotteries with the licensing authority's intention with regard to the protection of minors

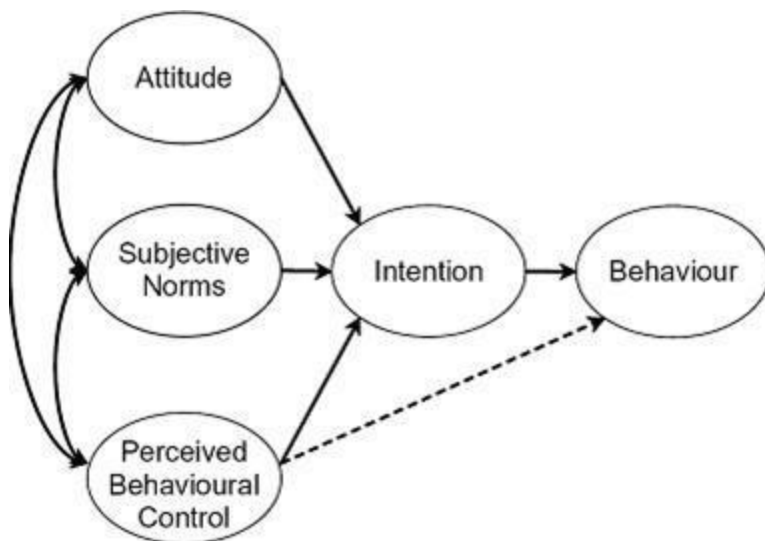
## Key aspects of the study →

1. Four Level Evaluation Model (Kirkpatrick, 1970)
2. Analysis of mystery shopping tests with respect to situative and personal factors of influence
3. Personal attitude of the sales partners towards the protection of minors and mystery shopping checks
4. Social norms
5. Perceived behavioral control  
(Theory of Planned Behavior, Ajzen, 1991)

## Donald Kirkpatrick's Four Level Evaluation Model (Kirkpatrick, 1970)



## Theory of Planned Behavior (Ajzen, 1991)



Basic training

Information focus

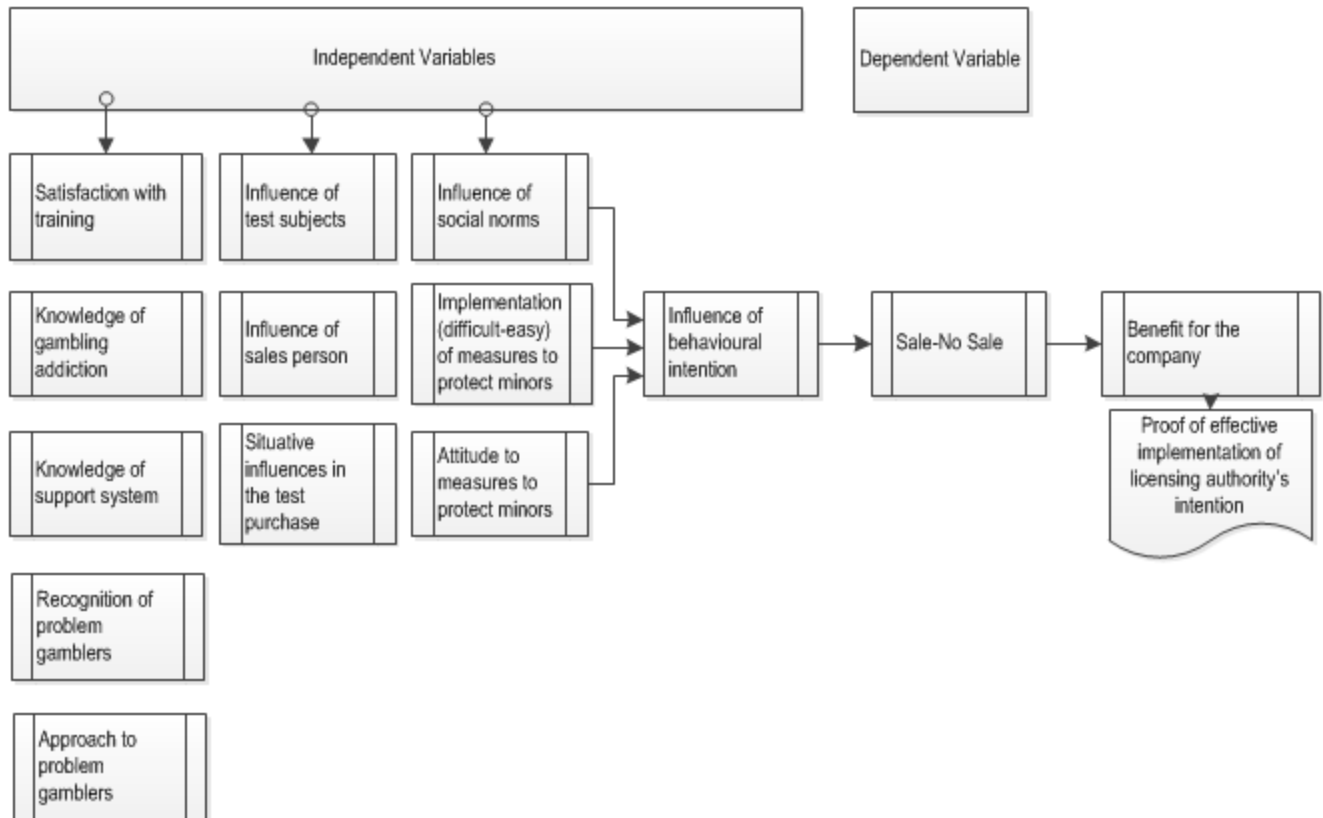
Online training

Refresher course after  
mystery shopping check





# Model used in the study:



## Study timeline and samples →

- Sample 1 -> Survey of sales partners in 2010 (Kalke et al, 2011)
- Sample 2 -> Sales partner satisfaction with responsible gaming measures
- Sample 3 -> Information focus 2014 (18 questions)
- Sample 4 -> Mystery shopping purchases 2014
- Sample 5 -> Survey 2015
- Sample 6 -> Analysis sample = overlap of samples 3, 4, 5

Year	2010	2011	2014 (1)	2014 (2)	2015	
Description	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Total(n)	2217	4093	5032	1 421	4516	1036

➤ Level 1: "Reaction"

Satisfaction with RG measures	n: 2010	Percent (%) 2010	n: 2014	Percent (%) 2014	Total (n)	$\chi^2$	P-value	Cramers V	Effect
Very good, good	1842	84	4941	98	6783	468.76	< 0.001	0.15	low
Fair	316	15	89	2	405				
Not satisfied	26	1	2	0	28				
Total	2184	100%	5032	100%	7216				

✓ Significant rise

➤ Level 2: “Learning” – Knowledge of Gambling Addiction

Knowledge of support for problem gamblers	2010	2010 (%)	2014	2014 (%)	Total	$\chi^2$	P-Value	Cramers V	Effect
Very good, good	1077	66.1	4367	83.9	5444				
Fair	911	31.7	630	5.6	1541	890.33	< 0.001	0.2	low
None	220	2.2	35	0.5	255				
<b>Total (n)</b>	2208	100%	5032	100%	7240				

✓ Significant rise

## Recognition of and Dealing with Problem Gamblers

Dealing with problem gamblers	2010	2010 (%)	2014	2014 (%)	$\chi^2$	P-Value	Cramers V	Effect
Very good, good	1159	52.8	3504	69.6	169.57	< 0.001	0.09	low
Fair	901	41.1	1340	26.6				
None	134	6.1	188	3.8				
<b>Total (n)</b>	2194	100%	5032	100%				

✓ Significant rise

## Level 3: Behavior

Behavior during test purchase (mystery shopping)		Age of salesperson			Total
		up to 30 years of age	31 to 50 years of age	over 50 years of age	
No sale	Number	157	526	227	910
	% of salesperson age group	87.2%	91.3%	81.1%	87.8%
Sale	Number	23	50	53	126
	% of salesperson age group	12.8%	8.7%	18.9%	12.2%
<b>Total (n)</b>	Number	<b>180</b>	<b>576</b>	<b>280</b>	<b>1036</b>
<b>Total(%)</b>	% of salesperson age group	100%	100%	100%	100%

## Difference significant

	Value	df	Asymptotic significance (bilateral)
Chi-square	18.600 <sup>a</sup>	2	0.00
by Pearson	17.726	2	0.00
Likelihood ratio	6.607	1	0.01
Correlation linear-with-linear			
<b>Total (n)</b>	1036		

a. 0 cells (0,0%) have an expected frequency of less than 5.  
The minimum expected frequency is 21,89.

Difference  
significant

		Number of training courses				Total
		None	1 to 2x	2 to 5x	> 5	
Behavior	No sale	Number (n) 17 81.0%	183 86.7%	336 85.9%	374 90.6%	910 87.8%
	Sale	Number (n) 4 19.0%	28 13.3%	55 14.1%	39 9.4%	126 12.2%
Total		Number (n) 21 100%	211 100%	391 100%	413 100%	1036 100%

Difference  
significant

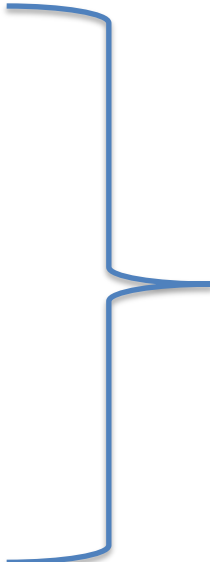
Behavior during test purchase (mystery shopper)		Asked for ID		Total
		No	Yes	
Behavior	Number	798	112	910
	No sale    % of "those who asked for ID"	86.6%	98.2%	87.8%
	Number	124	2	126
	Sale        % of "those who asked for ID"	13.4%	1.8%	12.2%
Total	Number	922	114	1036
	% of "those who asked for ID"	100%	100%	100%



Behavior during test purchase (mystery shopper)			Asked age		Total
			No	Yes	
Behavior	No Sale	Number	367	543	910
		% of those who asked age	74.6%	99.8%	87.8%
	Sale	Number	125	1	126
		% of those who asked age	25.4%	0.2%	12.2%
Total		Number	492	544	1036
		% of those who asked age	100%	100%	100%

Difference  
significant

- Dornbirn with 42,301 inhabitants
- Graz (city) with 226,244 inhabitants
- Innsbruck (city) with 113,392 inhabitants
- Klagenfurt (city) with 90,141 inhabitants
- Linz (city) with 183,504 inhabitants
- Salzburg (city) with 142,662 inhabitants
- St. Pölten (city) with 49,121 inhabitants
- Steyr (city) with 39,340 inhabitants
- Villach (city) with 57,497 inhabitants
- Wels (city) with 56,478 inhabitants
- Vienna with 1,550,123 inhabitants and
- Wiener Neustadt (city) with 37,672 inhabitants



Definition  
of "city":  
more than  
30,000  
inhabitants

Difference  
significant

Behavior during test purchase (mystery shopper)			Region		Total
			City	Rural	
Behavior	Non sale	Number	243	667	910
		% in “region”	92,00%	86,40%	87,80%
	Sale	Number	21	105	126
		% in “region”	8,00%	13,60%	12,20%
Total		Number	264	772	1036
		% in “region”	100,00%	100,00%	100,00%

The sales partners were asked, if they agreed with the use of mystery shopping checks or not.  
And the result is also as would be expected, namely that those who agree with the use of such check also do not sell to minors -> Difference significant

How easy or difficult is it for you to implement the measures to protect minors (e.g. ID checks)?		Implementation of measures to protect minors		Total	
		very difficult quite difficult	very easy		
Behavior	No sale	Number	376	534	910
		% in implementation of measures to protect minors	84.90%	90.10%	87.80%
	Sale	Number	67	59	126
		% in implementation of measures to protect minors	15.10%	9.90%	12.20%
Total		Number	443	593	1036
		% in implementation of measures to protect minors	100%	100%	100%

Difference  
significant

[illegible]

With regard to gender –  
sales partners are more likely to sell a lottery product  
to an underage girl than to an underage boy. The  
difference here is significant.

There was no significant difference with regard to the  
time of the test purchase (before 12 pm and after 12  
pm).

## CHAID Analysis

Dependent  
variable:

Behavior  
during test  
purchase  
(mystery  
shopping)

Independent variable:

Type of customer (sales category A, B, C), city/rural setting, time of test purchase, sector, gender of mystery shopper, gender of salesperson, verification of age, request for ID, position in the sales outlet, length of service in company, knowledge of gambling addiction, level of knowledge of support services, satisfaction with information from Austrian Lotteries, recognition of problem customers, approach to problem customers, number of problem customers, number of test purchases by young people under 16 years of age, probability of mystery shopping test purchases, difficulty in implementing responsible gaming measures and assessing the importance to customers of measures to protect minors (social norm)



# English-German

Behavior = Verhalten

Node 0 = Knoten

Category = Kategorie

No sale = Kein Verkauf

Sale = Verkauf

Total = Gesamt

Asked age = nach Alter gefragt

Adj. P-Value=0.000, Chi-squared=153.849

Df=1

No = Nein

Yes = Ja

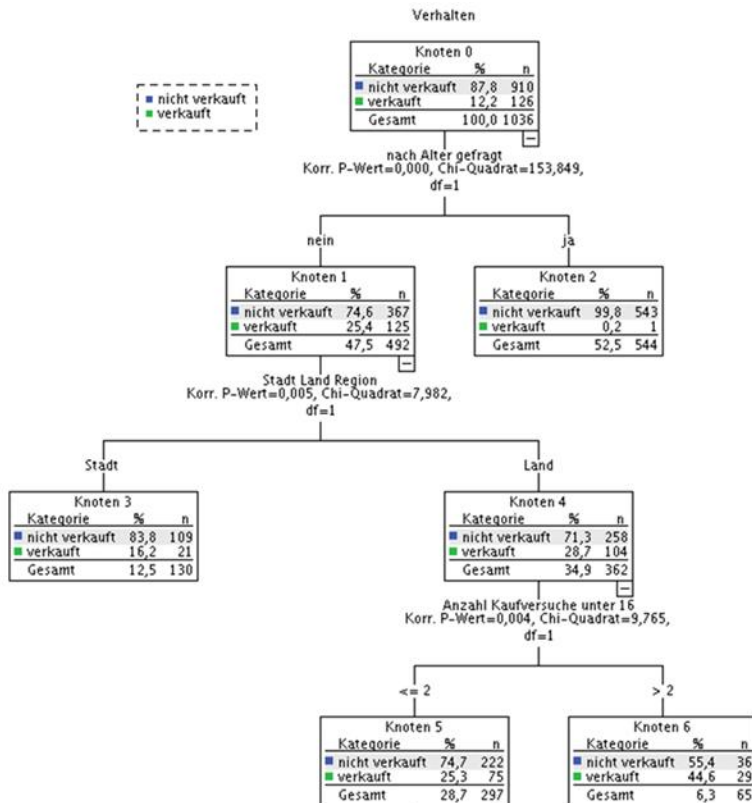
City/rural area = Stadt/Land

City = Stadt

Rural= Land

Anzahl der Kaufversuche von unter 16 Jährigen

Number of purchase attempts by under 16s



- Logistic regression: 1,036 cases included

Step 6	Regression coefficientB	Standard error	Wald	df	Sig.	Exp(B)
Age of mystery shopper	1.38	0.147	88.423	1	0	3.974
Gender of mystery shopper	1.153	0.318	13.148	1	0	3.167
Asked age	-7.02	1.079	42.318	1	0	0.001
Asked for ID	-4.353	0.887	24.076	1	0	0.013
Number of responsible gaming training courses	-0.493	0.166	8.805	1	0.003	0.611
Opinion of mystery shopping checks	-1.202	0.373	10.367	1	0.001	0.301
Constant	-17.143	2.006	73.047	1	0.00	0.00

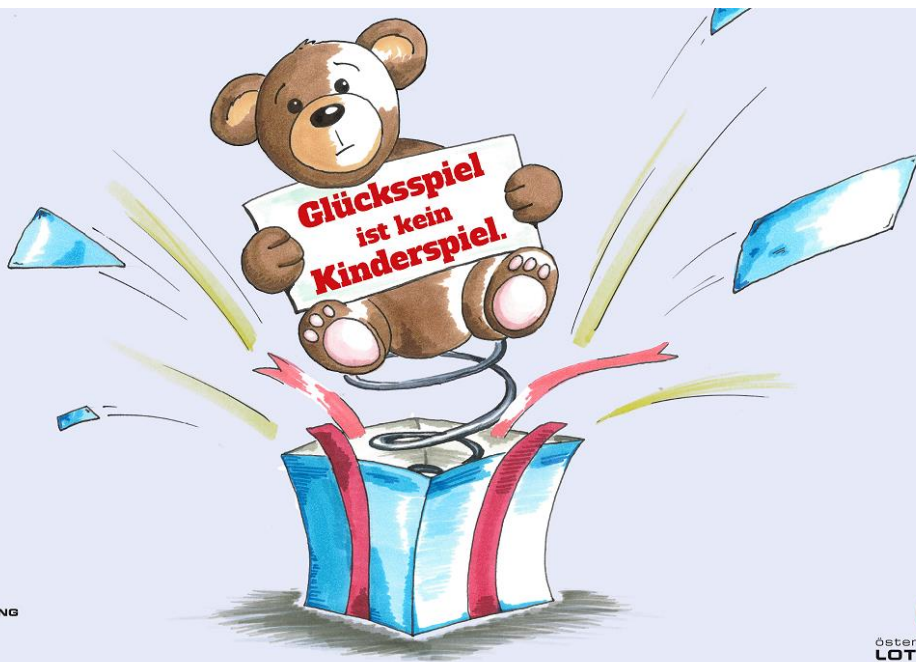
Nagelkerke R-Square explains in  
Step 6 -> 61.4 % of the variance

## Findings

Combined measures seem to work:

1. Contractually defined provisions to protect customers
2. Training measures
3. Mystery shopping checks

→ Possibility to apply the results of the study in future preventive measures



SPIELE MIT  
VERANTWORTUNG

  
österreichische  
LOTTERIEN

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