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Development of targeted communication strategies to promote prudent antibiotic usage: needs assessment among the public

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Background

A better understanding of the public's attitudes, knowledge and beliefs

Effective, targeted communication strategies

(Kreuter & Wray, 2003).

Research Questions

What are the public's attitudes, knowledge and beliefs regarding to antibiotics and antibiotic resistance?

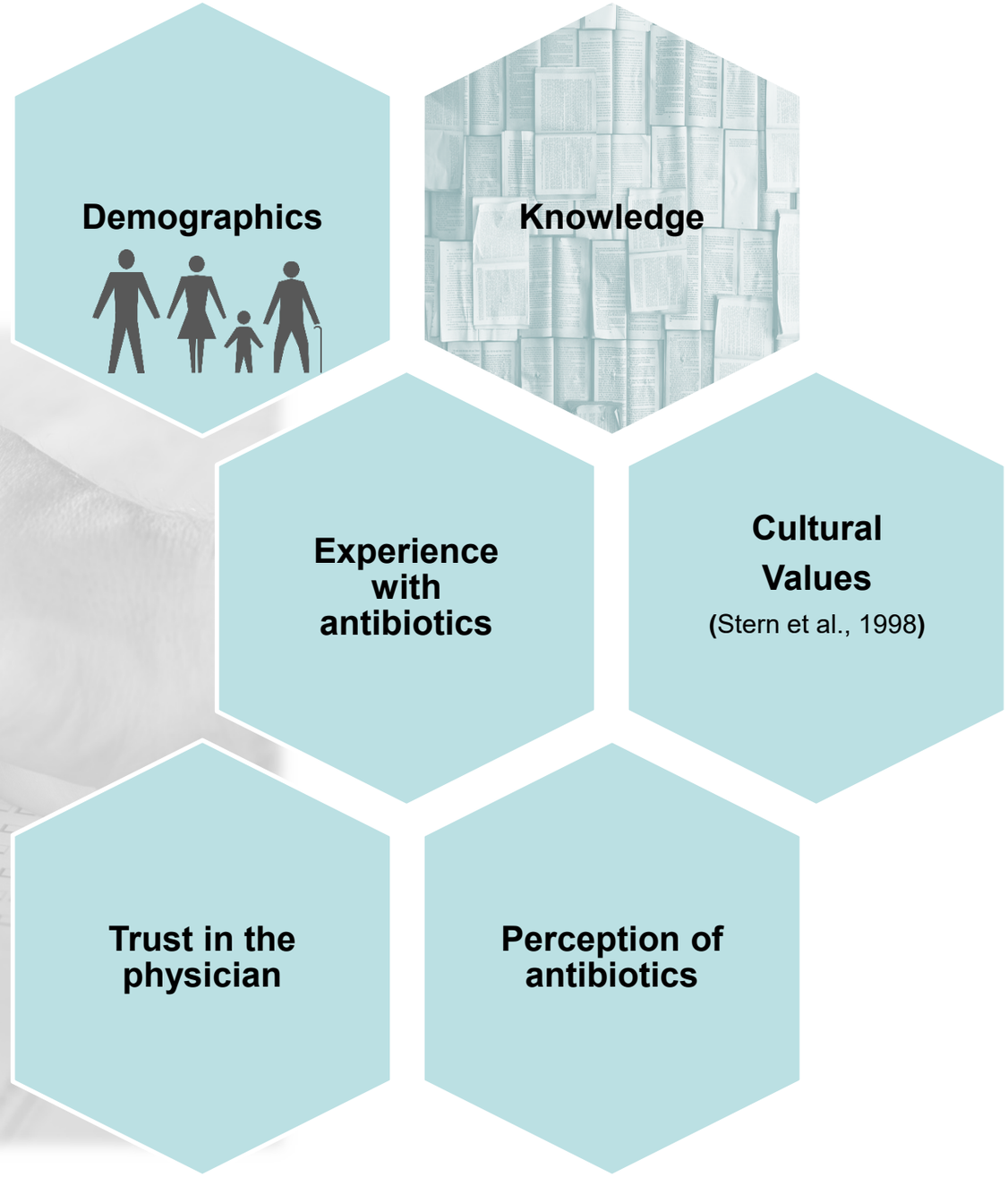
Which differences can be observed and how could these differences be addressed in targeted communication to promote a prudent antibiotic usage among the public?

Method

- Online survey (*N* = 1,260).
- Representative Quota Sample of the swiss population (German/ French-speaking)

- **Demand for antibiotics**
- **Willingness to adopt preventive measures**

(McCullough, Parekh, Rathbone, Del Mar & Hoffmann, 2016).



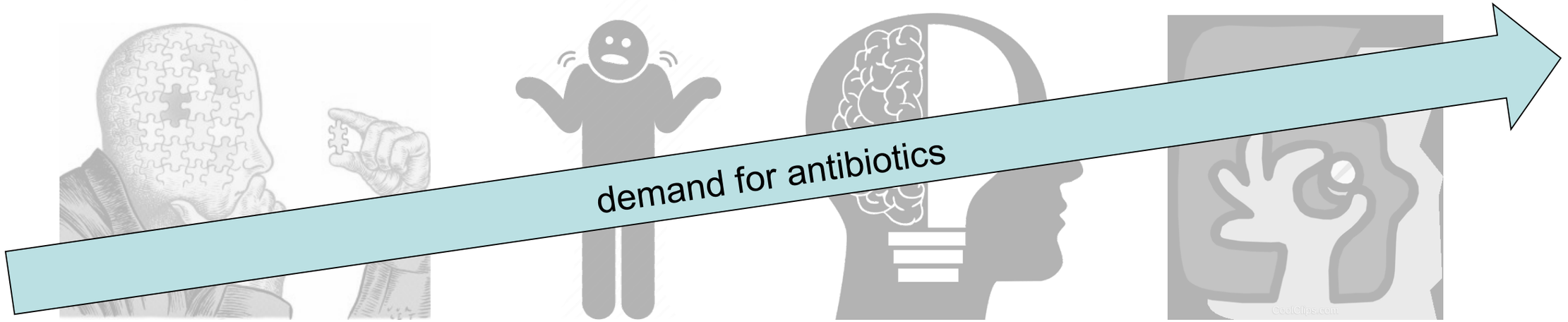
Cluster analysis

(Backhaus et al., 2008)

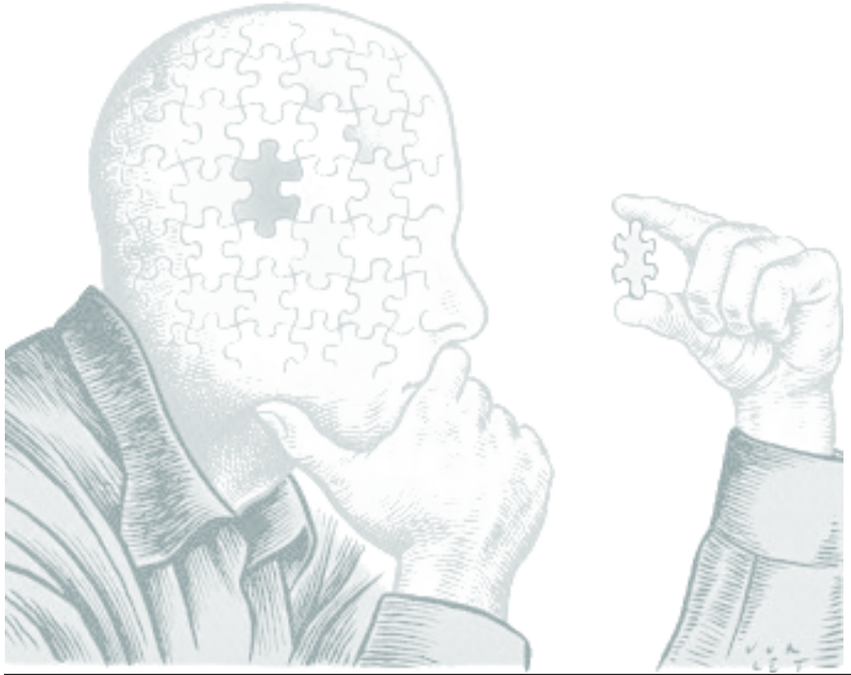
- (*Fs* > 58, *p*s < .001, η_p^2s > .13)

	1: *n* = 173, 14%		2: *n* = 464, 38%		3: *n* = 417, 34%		4: *n* = 174, 14%				
	M	SF	M	SF	M	SF	M	SF	F		part. η^2
Demand for antibiotics	1.20[d]	0.01	1.86[c]	0.01	2.44[b]	0.01	3.17[a]	0.01	143.41	***	0.27
Willingness for prevention	5.13[a]	0.06	4.88[b]	0.04	3.70[d]	0.04	4.20[c]	0.06	195.37	***	0.34
Perception#											
Benefits	2.74[d]	0.07	4.10[b]	0.05	3.86[c]	0.05	4.66[a]	0.07	128.49	***	0.25
Risks	5.22[a]	0.07	5.00[b]	0.04	3.89[d]	0.05	4.72[c]	0.07	131.37	***	0.25
Attitude	4.73[a]	0.08	4.00[b]	0.05	3.55[c]	0.05	3.55[c]	0.08	58.42	***	0.13
Social Norm	5.12[a]	0.07	5.28[a]	0.05	4.21[b]	0.05	3.40[c]	0.07	203.89	***	0.35
Trust in Physician	3.50[d]	0.08	4.85[b]	0.05	4.17[c]	0.05	5.13[a]	0.08	100.36	***	0.21

Cluster analysis



Cluster analysis: Experienced Sceptics (*n* = 173, 14%)



- low demand and usage of antibiotics
- aware of the risks
- more experience with antibiotic resistance
- Less trust in physicians

Recommendations for communication
Confirm their high level of risk awareness and low antibiotic use.

Raise awareness of preventive measures that are effective against the spread of antibiotic resistance.

Cluster analysis: Young Unwilling (*n* = 417, 34%)

- little willingness to adopt preventive measures
- rather uncritical regarding antibiotics, low risk perception
- younger

Recommendations for communication
Endorse their low current antibiotic use and increase their awareness about the risks of antibiotic use.

Use the general education system as a communication channel.

Cluster analysis: Knowledgeable Undifferentiated

(*n* = 464, 38%)

- plenty of knowledge about antibiotics, antibiotic resistance and preventive measures
- neither very concerned about antibiotic resistance nor did they perceive many benefits in using antibiotics

Recommendations for communication

Refer to their high level of knowledge and to the existing strong norms regarding prudent antibiotic use in their social environment.

Raise their awareness about the risks of antibiotic use.

Cluster analysis: Self-Serving Users (*n* = 174, 14%)

- high demand and usage of antibiotics
- perceive a rather low individual responsibility
- strong egoistic and conservative values

Recommendations for communication
Stimulate a more prudent use of antibiotics by pointing out the benefits of antibiotics now and for future generations.

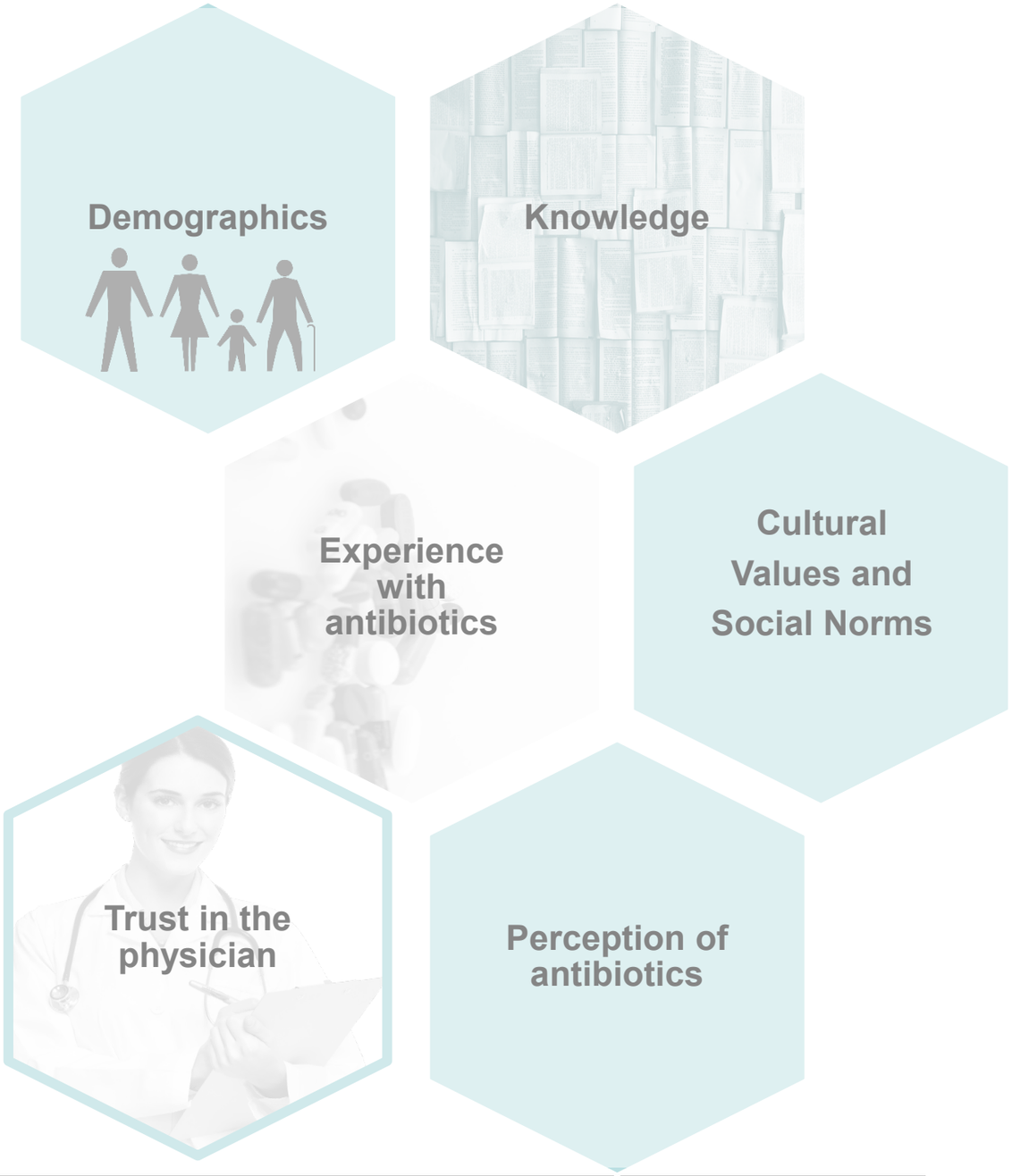
Conclusion

The Swiss population can be segmented into four groups with different perception, behaviour and needs. We developed recommendations for a targeted communication strategy in order to

… increase the public's risk awareness in regards to antibiotic resistance.

… decrease the demand for antibiotics.

… increase the willingness and ability to adopt preventive measures.



Discussion

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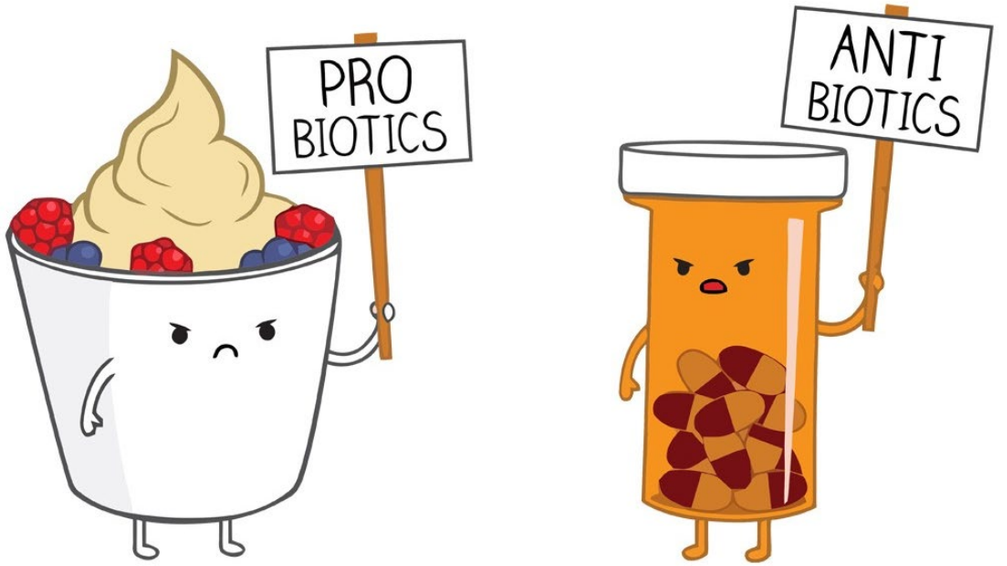

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