



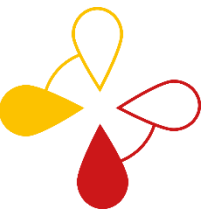
Who gives (plasma)? Motivators and barriers

EVA-MARIA MERZ

VRIJE UNIVERSITEIT AMSTERDAM & SANQUIN RESEARCH

JANUARY, 14TH 2020

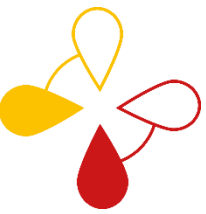
IPFA-EBA WORKSHOP PLASMA COLLECTION



“Final donation for man whose blood saved 2.4M babies”

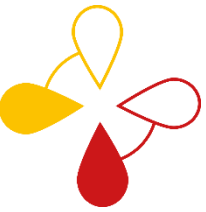
The Sydney Morning Herald
May 11th, 2018





Research on Donor Behaviour

- Identify determinants of onset, continuation and cessation of donating based on theory and empirical work
- Influence donor behaviour via targeted marketing, recruitment and retention strategies



Donor Studies Research Group

- Donor Behaviour:
 - Psycho-social aspects; recruitment and retention
 - Psychology and sociology
- Donor Cognition:
 - Emotion regulation; anxiety and coping
 - Cognitive science and artificial intelligence
- Donor Health:
 - Biomedical aspects; eligibility and health effects
 - Epidemiology and (bio)statistics



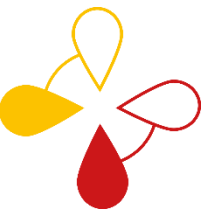
Eva-Maria Merz
Senior Researcher, PI
Associate Professor VU



Lisanne Huis in 't Veld
Assistant Professor
Tilburg University



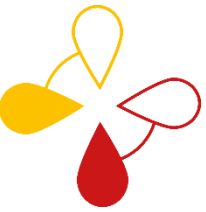
Katja van den Hurk
Head of Research
Sanquin, PI



Sanquin

- Only organization in the NL authorized to collect and supply blood products
- Not-for-profit
- Approximately 3,000 employees:
 - **Blood Bank --> InPlace**
 - Plasma Products
 - Diagnostic Services
 - **Research** – close collaboration with academic centers
 - Reagents

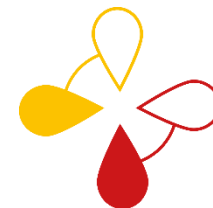




Blood Collection by Sanquin

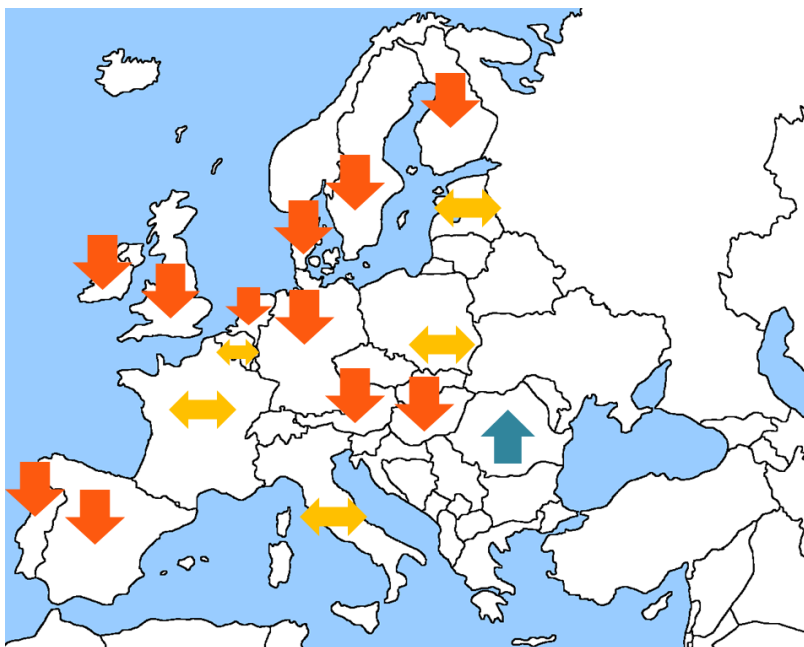
- Donation Centers: 55 fixed and ~85 mobile (2018)
- Voluntary non-remunerated donors: ~ 330.000
 - % NL population ~3.5
 - % Whole plasma donors ~ 20





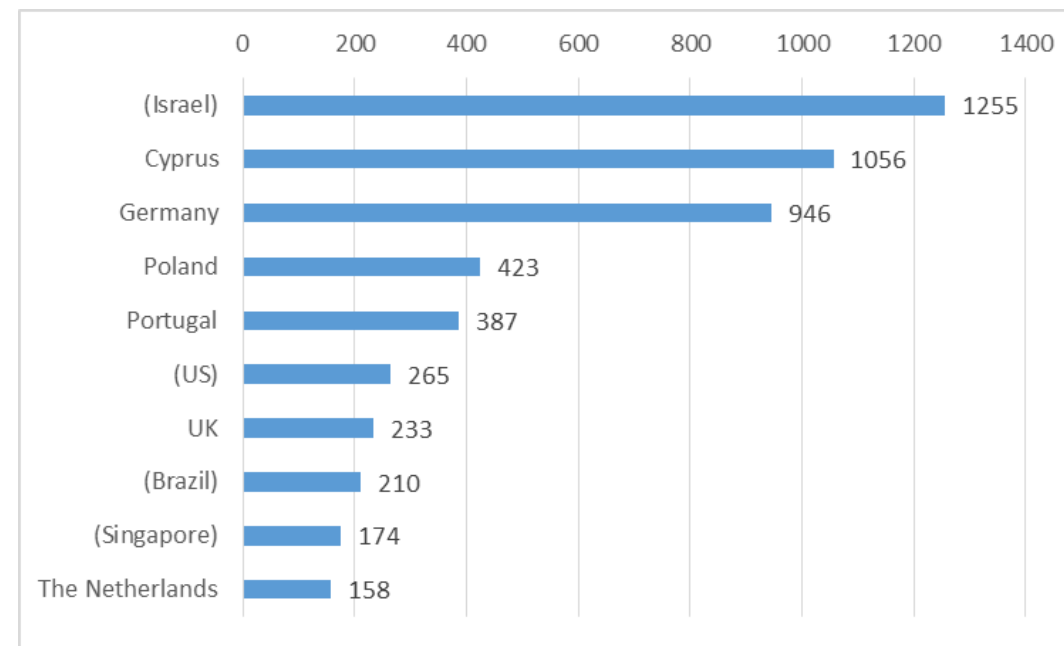
Donors in Europe and Beyond

Decreasing blood donor numbers

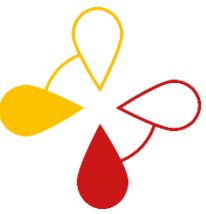


Huis in 't Veld, De Kort, Merz (2019), Transfusion

Number listed stem cell donors per 10,000 inhabitants

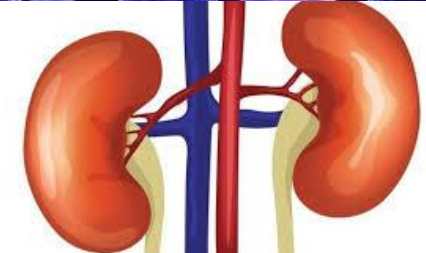
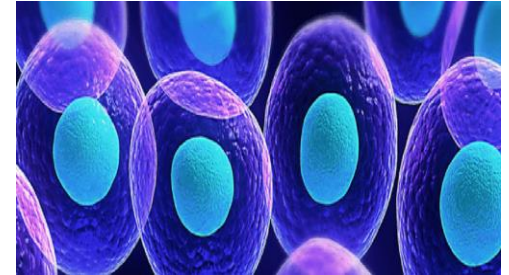


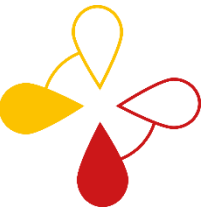
World Marrow Donor Association (2017), Year report



Donors of Substances of Human Origin

- Help strangers repeatedly
- Personal costs
- Different motivations and barriers
- High degree of free-riding





“Embedded Altruism”

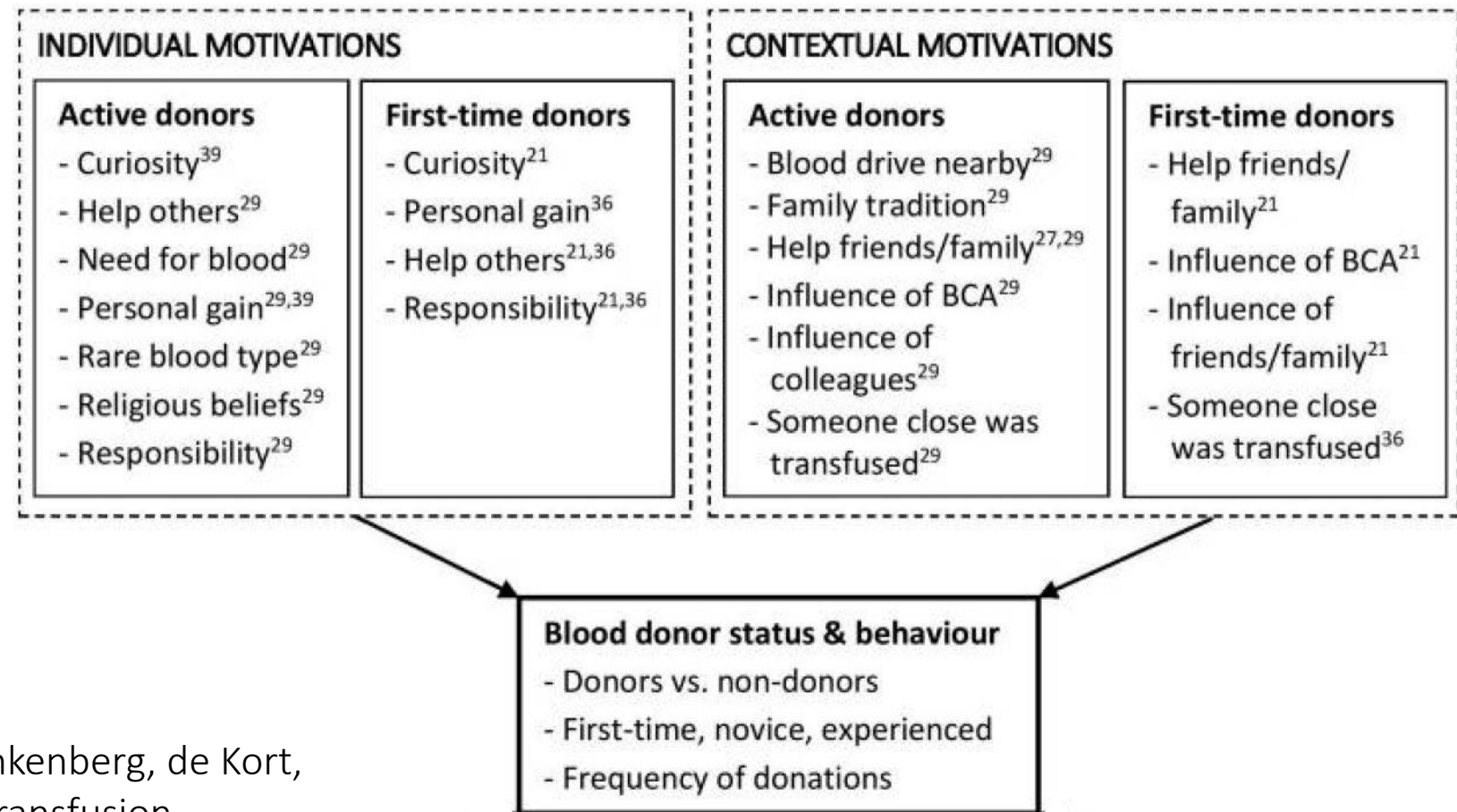
- Blood donation as *archetypal* example of altruism
- However, “blood must be collected” (like all SoHO)
- Examine “the social-structural framework that provides the incentives, opportunities, and constraints” (Healy, 2000, pp. 1633f.)

Healy, 2000

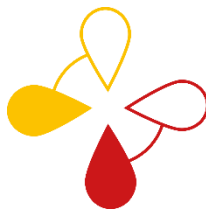


Tjeerd Piersma

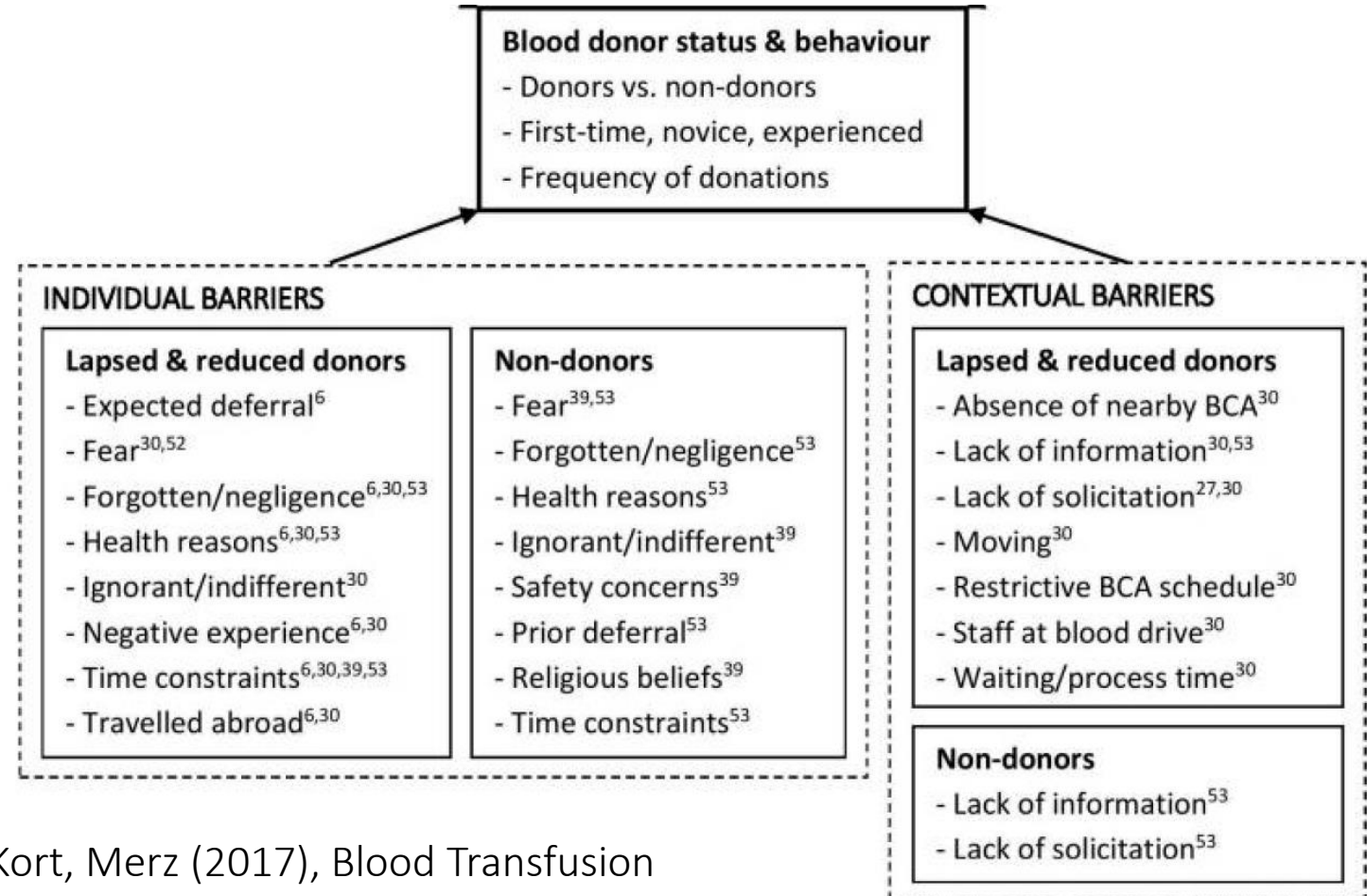
Motivators



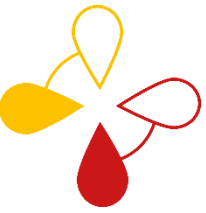
Piersma, Bekkers, Klinkenberg, de Kort, Merz (2017), Blood Transfusion



Barriers



Piersma, Bekkers, Klinkenberg, de Kort, Merz (2017), Blood Transfusion



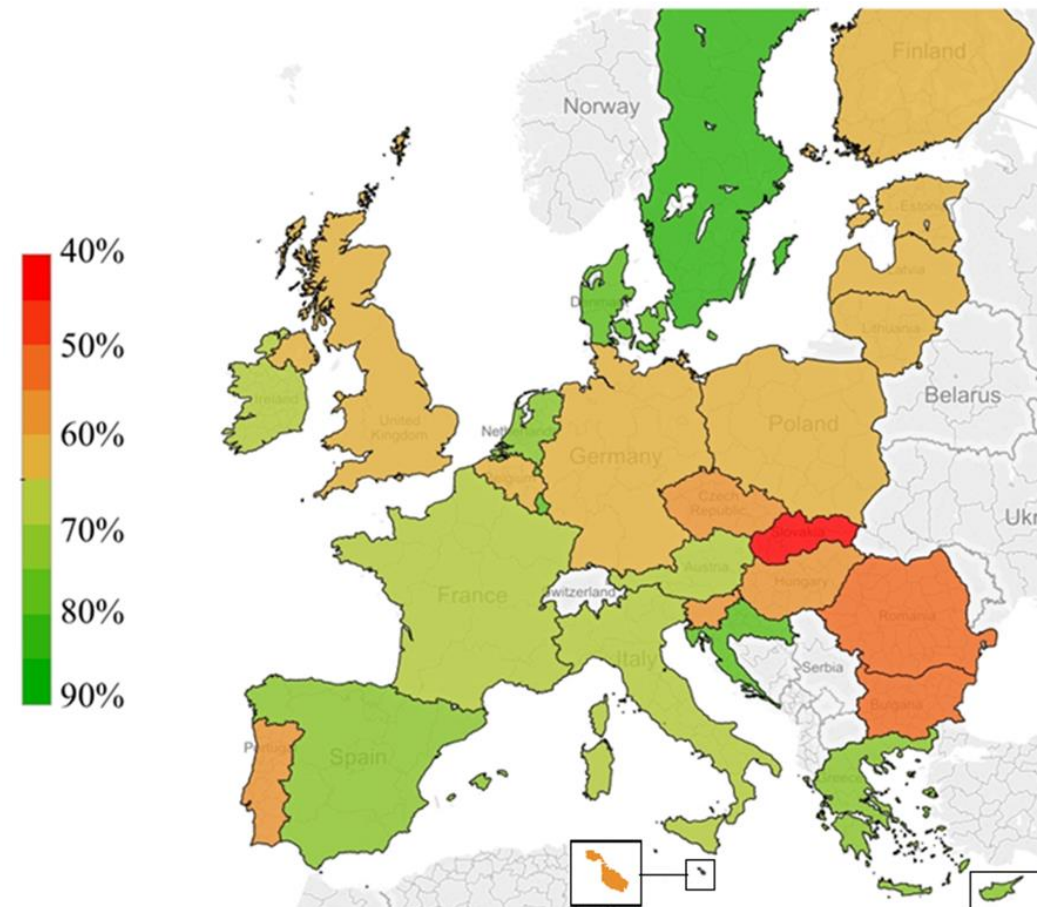
Knowledge Gaps

1. Monodisciplinary approaches (including methodological restrictions)
2. No attention to change
3. One-country studies only

Blood Donation Willingness in Europe

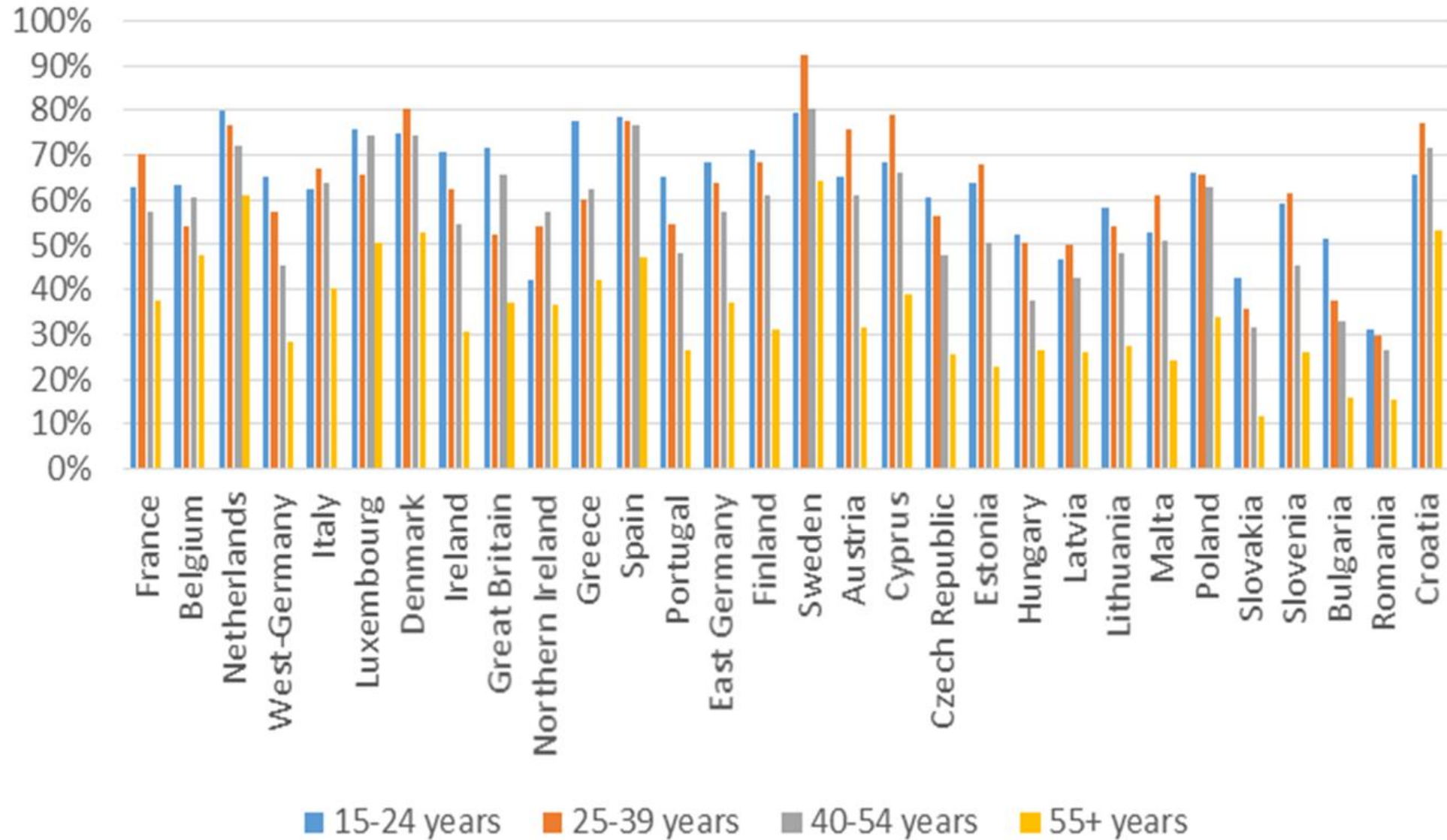
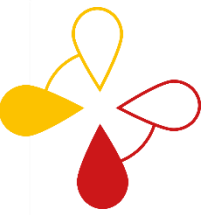


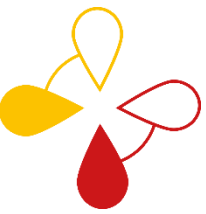
Lisanne Huis in 't Veld



Huis in 't Veld, De Kort, Merz (2019), Transfusion

Willingness to donate plasma across Europe

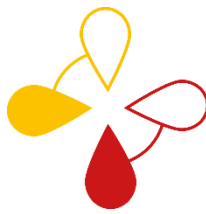




Predictors Plasma Donation Willingness

Individual	Family/network	Context
Female (- MI) Partner (+ BB) Children (+ MA, BB) Help people in need (+)	Knowing recipient (+) Help family friends (+, ex MI) Reciprocity (0)	Help people in need Alleviate shortages (+, ex MI) Research (0) Transfusion safe (+, ex MI)

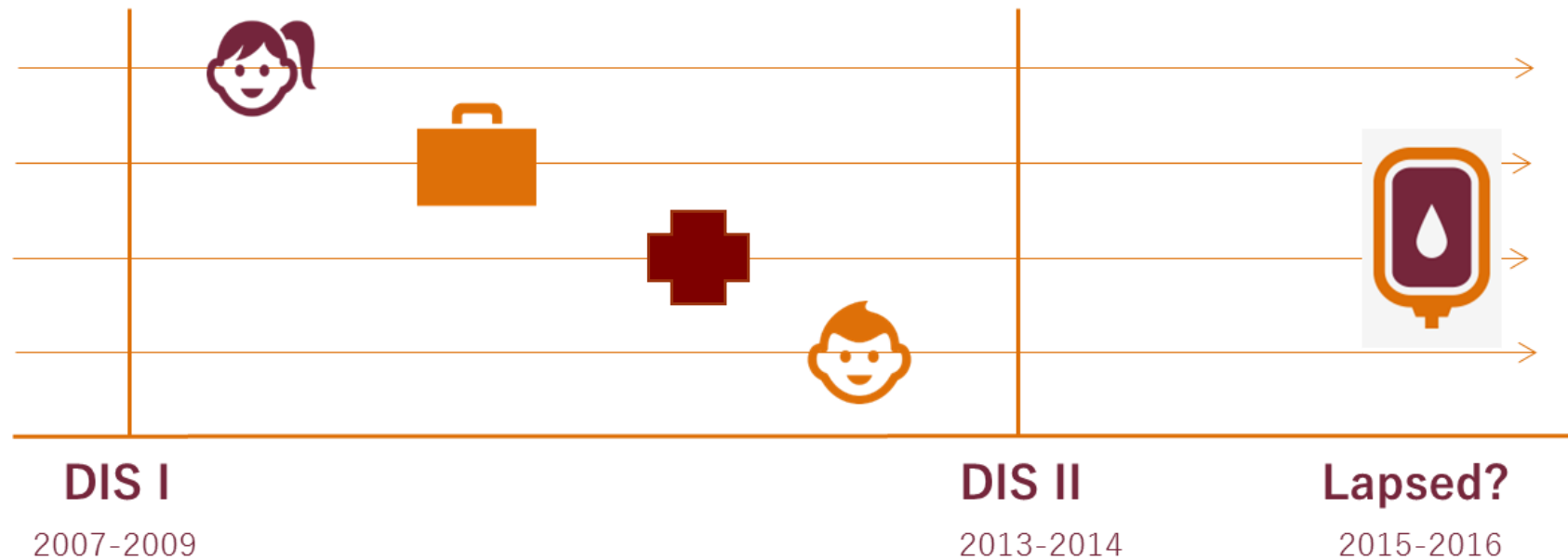
Piersma & Merz (2019), Transfusion



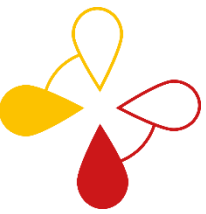
Motivators and Barriers over Time

DIS I & DIS II: demographic information, motivations, life events

2007-2014; n = 20,560



Piersma, Bekkers, De Kort, Merz (2019), Journal of Health and Social Behavior



Life Events

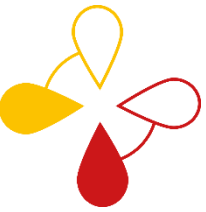
	Model A			Model B			Sobel test	
	B	SE	OR (95% CI)	B	SE	OR (95% CI)	Med.	<i>p</i>
Childbirth	0.58***	0.06	1.79 (1.60-2.01)	0.48***	0.06	1.62 (1.44-1.83)		
Perceived difficulty to plan donation				0.57***	0.02	1.77 (1.70-1.85)	29%	< .000

	Model A			Model B			Sobel test	
	B	SE	OR (95% CI)	B	SE	OR (95% CI)	Med.	<i>p</i>
Starting job	0.45***	0.17	1.57 (1.12-2.20)	0.08	0.28	1.08 (0.62-1.88)		
Weekly working hours				0.02	0.01	1.04 (1.01-1.04)	-	.076



Life Events

	Model A			Model B			Sobel test	
	B	SE	OR (95% CI)	B	SE	OR (95% CI)	Med.	p
Transfusion	-0.12*	0.06	0.89 (0.79-0.98)	-0.12*	0.06	0.89 (0.79-0.98)		
Talk about donating				0.07*	0.04	1.08 (1.01-1.16)	-	.491
Know other donors				-0.27***	0.04	0.76 (0.71-0.82)	-	.174
	Model A			Model B			Sobel test	
	B	SE	OR (95% CI)	B	SE	OR (95% CI)	Med.	p
Death	-0.11*	0.04	0.90 (0.82-0.98)	-0.11*	0.04	0.89 (0.82-0.98)		
Talk about donating				0.09*	0.04	1.10 (1.02-1.18)	-	.946
Know other donors				-0.28***	0.04	0.76 (0.70-0.81)	-	.905



Social Media



Volgen

Blood supply in danger because of commercial activities Sanquin.

I have been a donor (organ) until 20 min ago. Also from Sanquin, I deregistered. The government won't decide what I do, even though you make no choice yourself... Annoying for others but my own principles are more important...

Leuk · Beantwoorden · 4 w

Volgen

Ook al begrijp ik de emotie achter de tweet van @ArthurJapin heel goed en is het beleid

Not everybody donor. I, for example, am not allowed, like other #LGBT.

ieren. Andere naar ik zou lkskrant/sta...

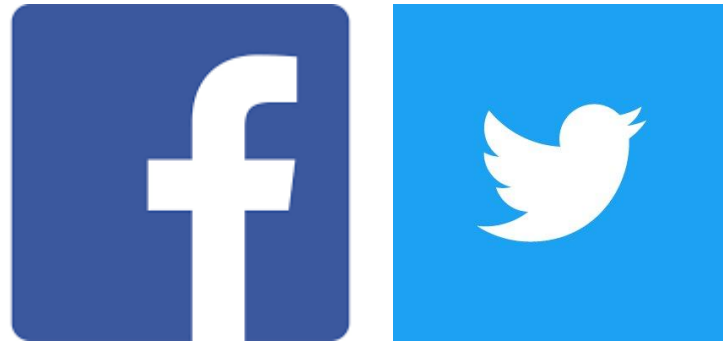


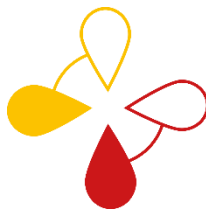
Steven Ramondt

Aim of Social Media Study

Explore who communicates what, when and how about blood donation on social media:

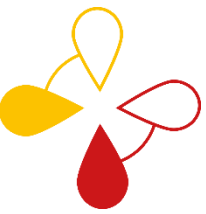
- Online messages Facebook and Twitter
- Focus on negative emotions and stopping reasons





Method

geweiger* afgewezen afwijzing afgekeurd afkeuring
"mocht niet"~3 "ik mag niet"~3 uitgesloten "mag geen
donor" "mag geen bloed" "mag geen donatie" "mocht
geen donor" "mocht geen bloed" "mocht geen
donatie" "mocht geen donor" weggestuurd "weg
gestuurd" "naar huis gestuurd" "terug gestuurd" "wil
mijn bloed niet"



Data

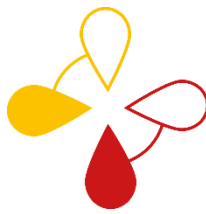
- Final dataset contained total of 96,408 messages

Number of online messages on blood donations and Sanquin per year

Year	2012	2013	2014	2015	2016
Total messages	14.737	15.116	15.398	23.757	27.400

- 12% contained words related to stopping and dissatisfaction
- Stopping reasons categorized into 11 topics

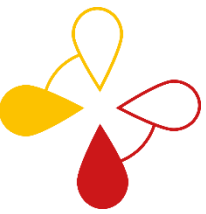
Merz & Kerkhof (2018), Vox Sanguinis



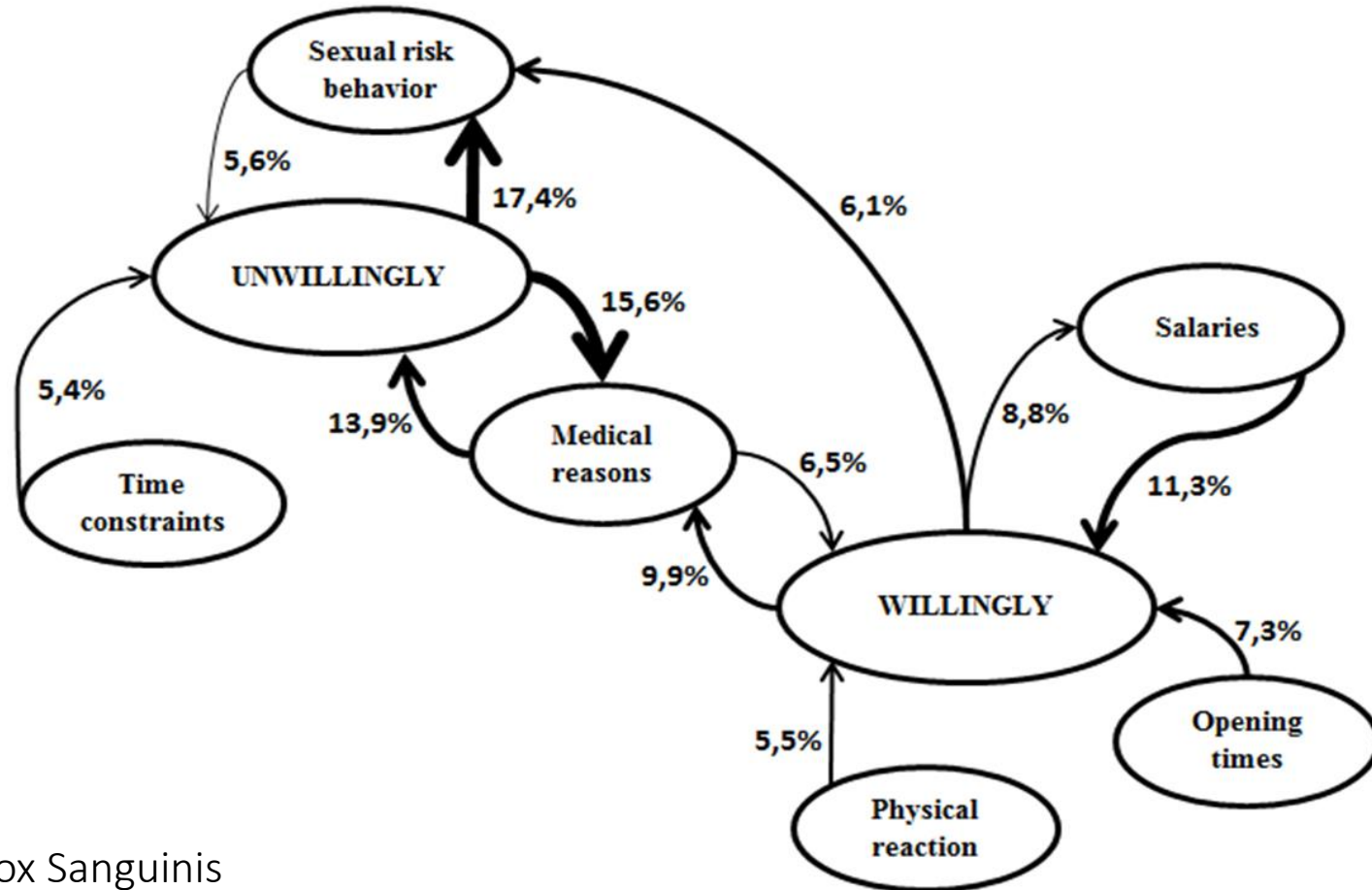
Topics

Percentages and number of messages per sub-topic

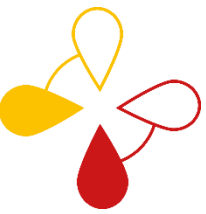
Donor-topics = 6336	
Medical reasons	43.3% (2743)
Physical reactions	22.0% (1394)
Travels	15.8% (999)
Lifestyle	6.6% (418)
Pregnancy	4.4% (280)
Organization-topics = 1899	
Location	57.4% (1089)
Waiting times	21.5% (409)
No call-up	21.0% (398)
Opening times	2.2% (41)
Policy-topics = 9838	
Sexual risk behavior	76.6% (7583)
Salaries and bonuses	23.6% (2320)



Reasons to End the Donor Career

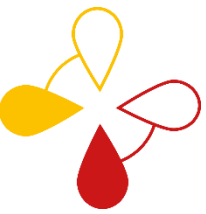


Merz & Kerkhof (2018), Vox Sanguinis



Summary and Conclusions

- Motivators often concern values and emotions (warm glow giving)
- Life events (awareness of need) can be key
- Barriers often concern practical and organizational issues
- Factors on different levels (individual, network, context) change and determine blood donor behaviour over time
- Social media as additional source



Summary and Conclusions

- Need for multidisciplinary model and dynamic approach
- (Donor) research should make use of different methods
- Personalize donor management across groups
- Some factors (e.g., blood bank related) can be manipulated
- Knowledge about non-donors is important
- Contextual differences matter

Acknowledgement



VU Philanthropy
Sanquin Donor Studies



donors