

The Surgical Hazardous Attitudes Reflection Profile (SHARP) Instrument - A First Prototype



*K.F.A.A. (Kirsten) Dabekaussen, Dr. R.A. (Renée) Scheepers, Prof. Dr. E. (Erik) Heineman, Prof.
Dr. M.J.M.H. (Kiki) Lombarts*



Why does it matter?

CONVENTIONAL DEFINITION OF SAFETY:

Safety is a **system** property that ensures that the number of adverse events is acceptably low



REVISED DEFINITION OF SAFETY:

Safety is a **process**: the ability to succeed under varying conditions.

Measuring safety should account for the ability to **respond**, monitor, **anticipate** and **learn**



Professional Performance & Lifelong Learning



Attitudes and behaviors become increasingly important

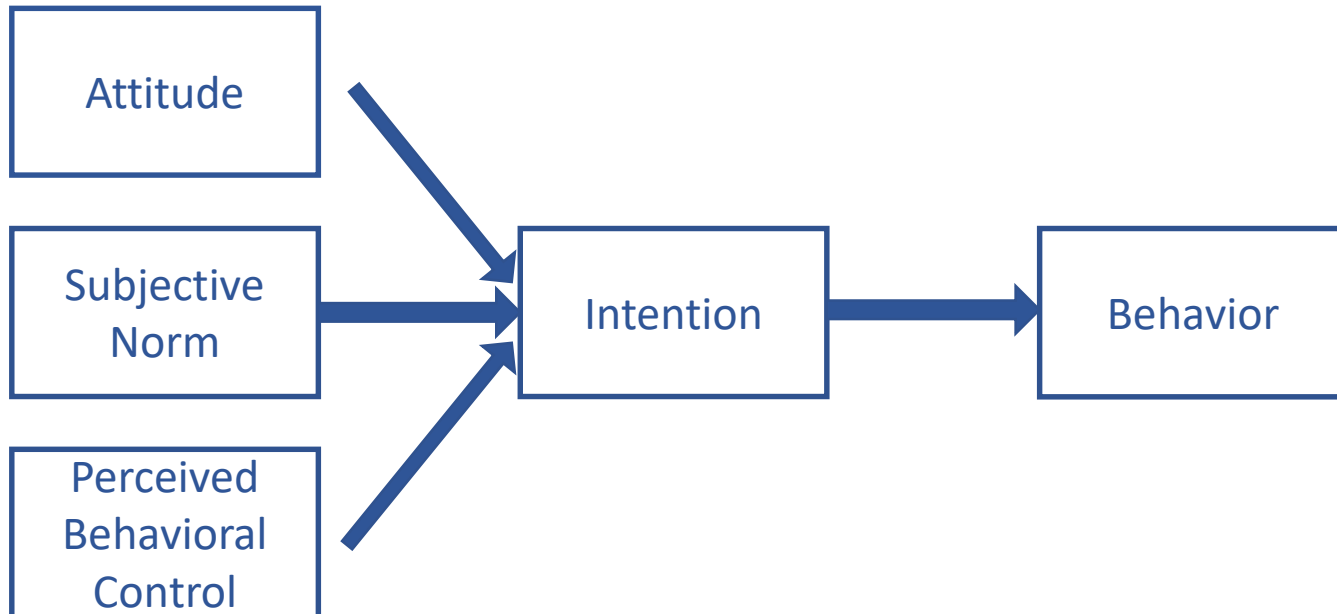
E Hollnagel et al. 2015. From safety 1 to safety 2.



Background

Hazardous Attitude:

“a personal motivational predisposition to respond to persons, situations or events that is potentially risky to patient care ”



Ajzen I. (1991) Theory of Planned Behaviour.



Background

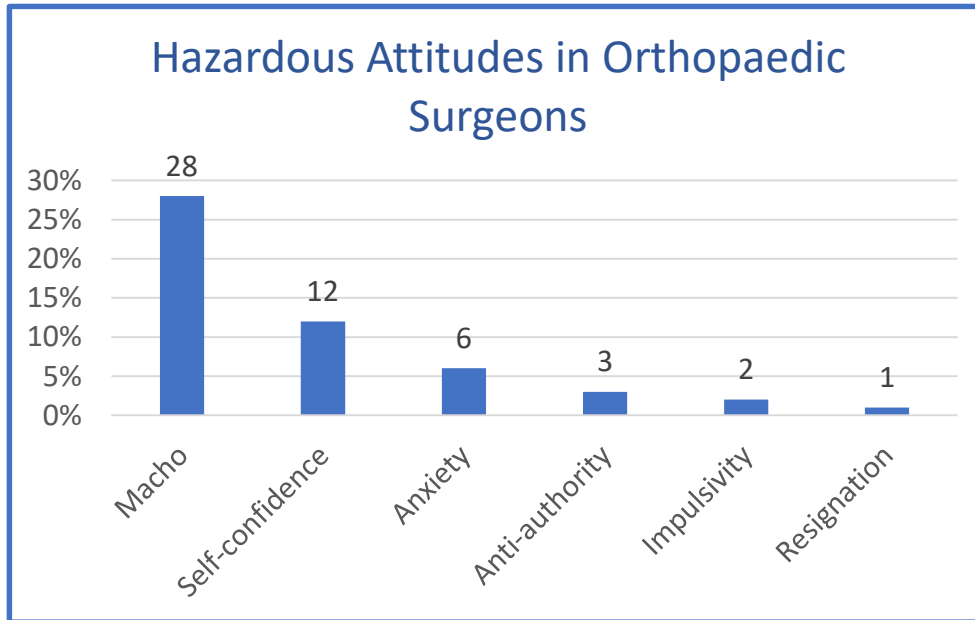
- Hazardous Attitudes defined in pilots (FAA)
- Measured by the Hazardous Attitudes Scale (new HAS)

Macho	Come on, I can do this!
Invulnerability	Nah, I don't think this wil happen to me
Resignation	What's the use. Forget it, I give up.
Impulsivity	Do it quickly
Anti-authoritan	Why should I listen to you>

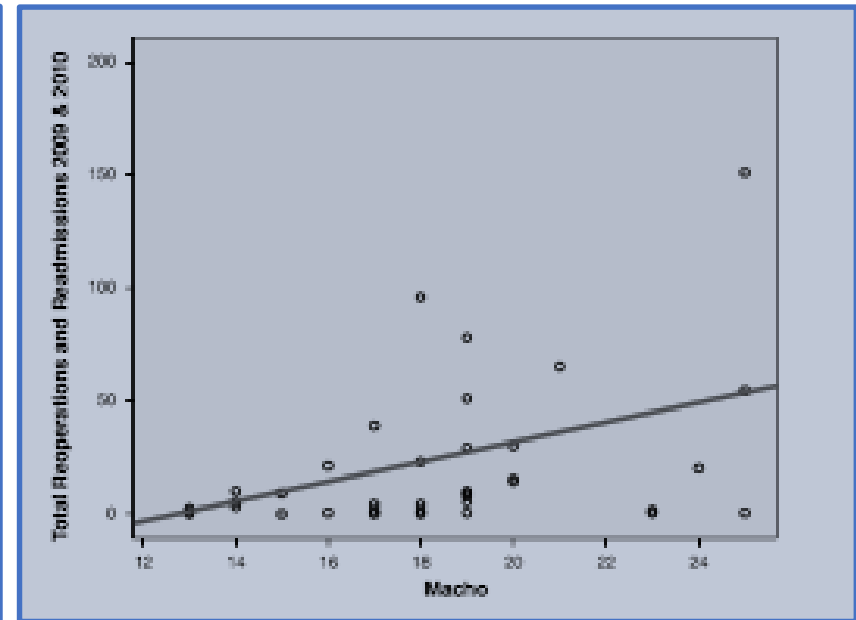


Background

- Not validated for surgeons or health care
- Two studies performed among surgeons



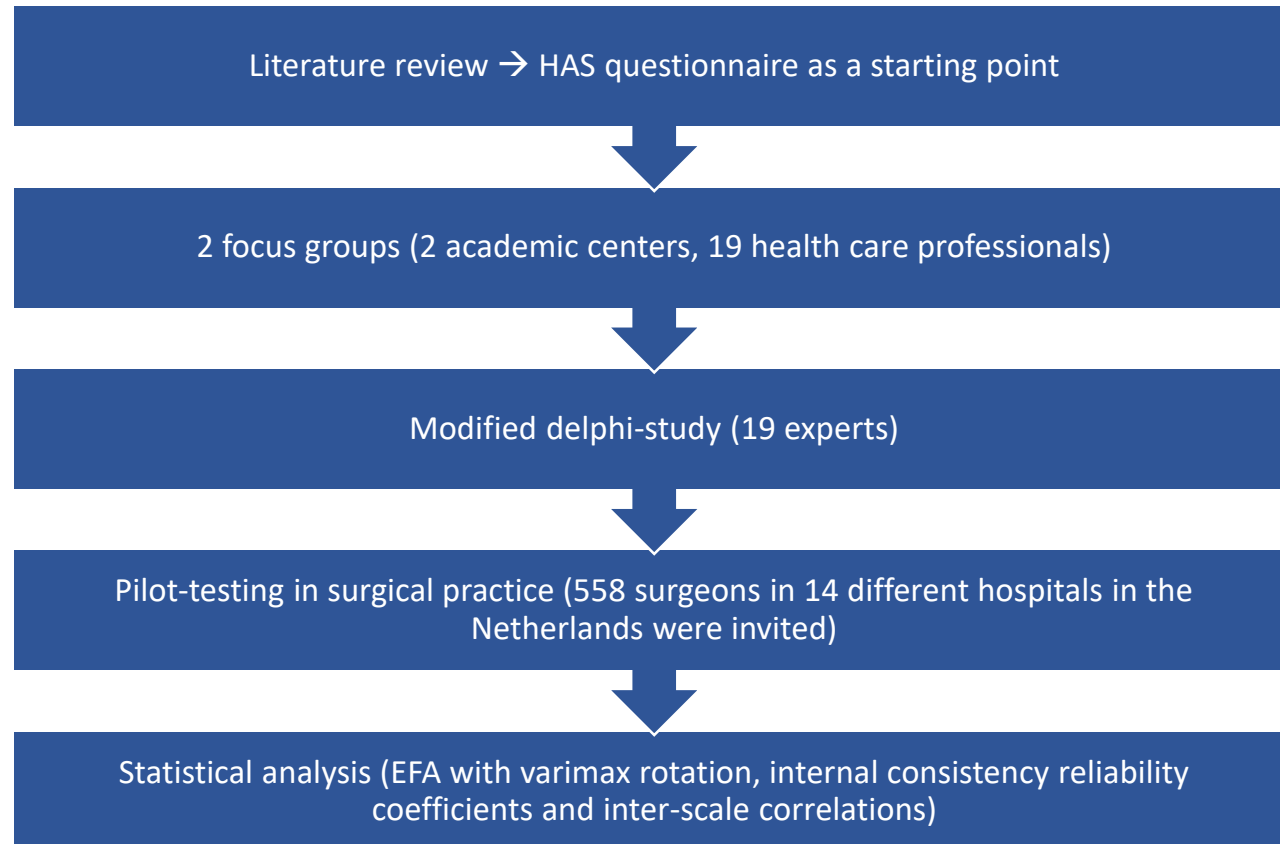
Bruinsma et al. (2015)



Kadzielsky et al. (2014)

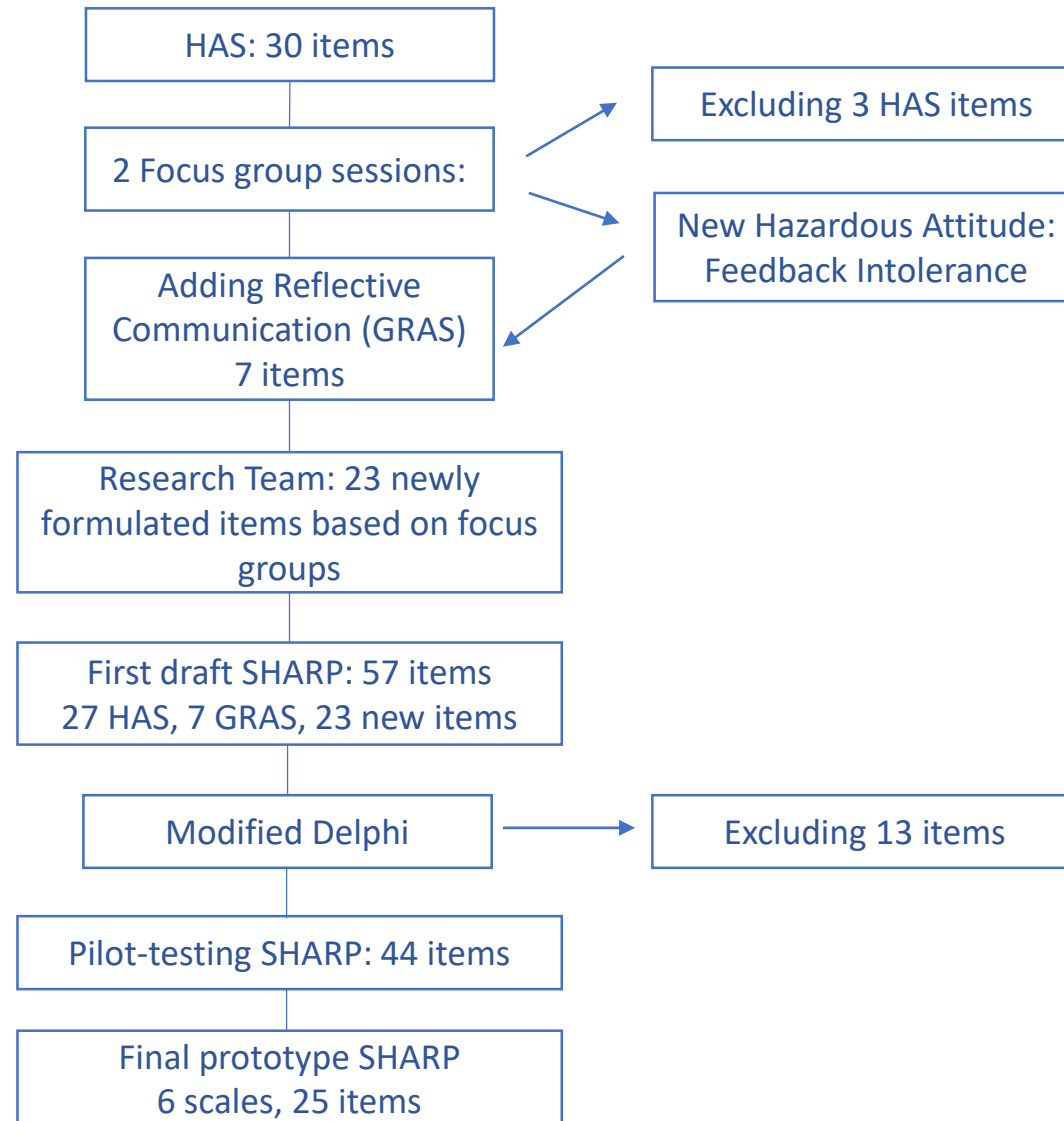


Instrument Development





Instrument Development





Results

		N
Setting	University Medical Center	89/302 (28,8%)
	Non-university teaching Hospital	180 (58,3%)
	General hospital	33 (10,7%)
Participants	Physicians participated (% of total invited)	302/558 (54,1%)
	Female attending physicians (% females)	87/302 (28,2%)
	Male attending physicians (% males)	215/302 (69,6%)
	Mean attending physician's age	47,2
	Mean years of experience attending physicians	22,4
Background participants	number of cardiothoracic surgeons/total (% of subspecialty)	15/302 (4,9%)
	number of otorhinolaryngology/total (% of subspecialty)	24/302 (7,8%)
	number of gynaecologists/total (% of subspecialty)	57/302 (18,4%)
	number of plastic surgeons/total (% of subspecialty)	23/302 (7,4%)
	number of orthopaedic surgeons/total (% of subspecialty)	38/302 (12,3%)
	number of general surgeons/total (% of subspecialty)	93/302 (30,1%)
	number of urologists/total (% of subspecialty)	35/302 (11,3%)

Characteristics of participants in the testing phase of the SHARP



Sample of final SHARP instrument

ITEMS SHARP	Factor loadings	Item to scale correlations
1. ATTITUDE TOWARDS AUTHORITY		
1.1. I understand colleagues who do not follow the rules concerning door movements in the operating room	0.492	0.643
1.2. Reporting incidents or calamities is of minimal added value	0.454	0.490
1.3. The hygiene rules in the hospital are totally right	0.617	0.707
1.4. It is unacceptable to wear hand and/or wrist jewellery at work	0.556	0.505
2. ATTITUDE TOWARDS OWN PERFORMANCE		
2.1. I only like to perform very challenging operations	0.793	0.811
2.2. I like to perform high risk operations	0.654	0.763
2.3. I perform above average in my professional group	0.502	0,666
3. ATTITUDE TOWARDS OWN ABILITIES		
3.1. If I have completed a night shift, I am able to operate the next morning	0.550	0.738
3.2. Phoning someone during an operation has no influence on my performance	0.499	0.681
3.3. I can operate for a long time (≥ 4 hours) without taking a break	0.394	0.741
4. ATTITUDE TOWARDS UNCERTAINTY		
4.1. While performing risky operations, I worry about not seeing landmarks and losing the overview.	0,414	0,645
4.2. I often worry that I cannot finish the original surgical plan	0.622	0.667
4.3. I often worry about complications, incidents and/or calamities when I operate	0.428	0.701
4.4. If an unexpected situation arises during the operation, I have a lot of difficulty adapting the original surgical plan	0.405	0.537
5. ATTITUDE TOWARDS PLANNED PROCEDURES		
5.1. The thoroughness of my preparation mostly determines the likelihood of me having problems during the case	0.419	0.788
5.2. A successful operation is totally dependent on a good preparation	0.613	0.834
Items GRAS		
6. ATTITUDE TOWARDS FEEDBACK		
6.1. I do not like to have my standpoints discussed	0,431	0,609
6.2. I do not welcome remarks about my individual performance	0,357	0,539
6.3. I am accountable for what I say	0,495	0,575



Results

	Mean	SD	20 th pct	80 th pct	Cronbach's Alpha
1. Attitude towards authority	3,63	0,40	3,40	4,00	0,778
2. Attitude towards own performance	2,84	0,55	2,50	3,25	0,688
3. Attitude towards own abilities	3,21	0,71	2,67	3,67	0,535
4. Attitude towards uncertainty	3,76	0,51	3,25	4,00	0,505
5. Attitude towards planned procedures	3,63	0,73	3,00	4,00	0,476
6. Attitude towards performance feedback	1,95	0,35	1,67	2,17	0,610

Mean, SD, and Chronbach's Alpha of the six-scale structure of the SHARP questionnaire



Results

	Authority	Own performance	Own abilities	Uncertainty	Planned Procedures	Performance feedback
Authority	1					
Own Performance	0,050	1				
Own abilities	0,055	0,317**	1			
Uncertainty	0,145*	-0,264**	-0,176**	1		
Planned Procedures	0,096	-0,183**	-0,005	-0,090	1	
Performance feedback	-0.314**	0,104	-0.070	-0,258**	-0,117*	1

Inter-scale correlations of the SHARP instrument (pearson's correlation coefficients)

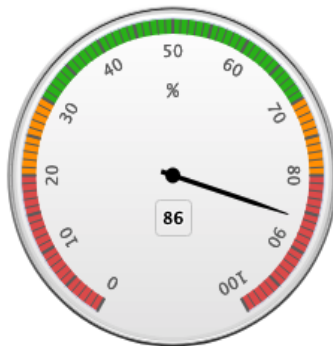


Future directions

Self-awareness and counteracting opportunities for education

HAZARDOUS ATTITUDE	ANTIDOTE
Macho: "I can do anything"	Taking chances is foolish
Anti-authorian: "Don't tell me"	Follow and respect the rules. They are usually right.
Performance Feedback: Who are you to tell me this? I am an excellent surgeon."	How can we help each other grow?

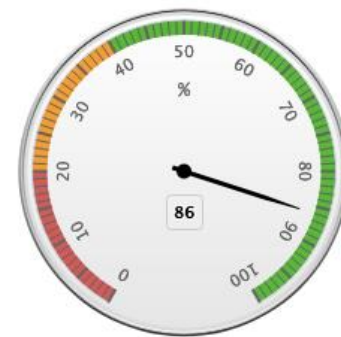
MachoMeter



AntiAuthorityMeter



FeedbackToleranceMeter





Questions or
suggestions?

k.f.a.a.dabekaussen@umcg.nl
scheepers@eshpm.eur.nl
e.heineman@umcg.nl
m.j.lombarts@amsterdamumc.nl