Attachment 3: Additional tables

Table 1A: Sociodemographic characteristics in each study cohort

	2020	2021		Subsample: 2020 and 2021
N	**391**	**211**		**20**
Test date 1	213	128		
Test date 2	93	83		
Test date 3	85	-		
Age (at time of Casper)				
M	21.32	21.46		25.6
SD	3.01	4.22		6.04
Δ2020-2021	$t(327.63) = -0.42$, $p = 0.67$, $d = -0.04$			
Gender				
NA (percentage of N)	61 (16%)	133 (63%)		8 (40%)
n male (percentage male in non-NA cases)	63 (19%)	19 (24%)		5 (42%)
n female	267	59		7
Migration background				
NA (percentage of N)	67 (17%)	136 (66%)		8 (40%)
n yes (percentage yes in non-NA cases)	116 (36%)	31 (41%)		6 (50%)
n no	208	44		6
Parents' highest level of education				
NA (percentage of N)	77 (20%)	140 (66%)		8 (40%)
n academic (percentage academic in non-NA cases)	226 (72%)	48 (68%)		10 (83%)
n no academic background	88	23		2

Participants needed to provide their birth date during the registration for Casper. Therefore, information about age was available for the whole sample. There was no significant difference in age between the two samples.

Other socio-demographic characteristics were assessed in a voluntary questionnaire. For the 2021 sample sociodemographic data is missing for more than 60% - possibly because many applicants in this sample (TMS participants) were not invited to fill-out the sociodemographic questionnaire.

Table 2A: Descriptive statistics of predictor and outcome variables for each study cohort

	2020 study				2021 study			
	n	**% of overall sample**	**mean**	**sd**	**n**	**% of overall sample**	**mean**	**sd**
Casper20	391	100%	0.00	0.99	20	9%	0.28	0.98
Casper21	20	5%	0.25	1.25	211	100%	-0.01	0.99
Casper_last	391	100%	-0.01	1.01	211	100%	-0.01	0.99
Abitur	300	77%	1.72	0.43	66	31%	1.74	0.48
TMS	234	60%	102.80	9.67	142	67%	103.63	9.30
HAM-Nat SC	209	53%	0.64	1.19	66	31%	0.38	1.28
HAM-Nat AP	209	53%	0.04	0.59	66	31%	-0.04	0.59
HAM-Nat RS	209	53%	0.17	0.58	66	31%	0.04	0.65
HAM-SJT	209	53%	-0.43	0.15	59	28%	-0.35	0.11
MMI	21	5%	3.37	0.39	1	0%	3.72	
Cognitive study success	67	17%	82.09	6.91	22	10%	82.90	8.04
OSCE overall performance	82	21%	85.95	4.41	25	12%	85.45	4.46
OSCE station patient history	82	21%	79.24	9.47	25	12%	78.90	8.54
OSCE station communication skills	46	12%	81.85	11.37	16	8%	80.00	7.75

SC=natural science subtest, AP=arithmetic problem solving subtest, RS=logical reasoning subtest

For most of the variables, unpaired Welch t-Tests and Mann-Whitney-U-Tests did not reveal any significant differences between the two samples. HAM-SJT values significantly differed between the 2020 and 2021 study ($W=3773.5$, $p<.001$).

For those who participated in the study in both years (n=20), the rank correlation of Casper performance between years was small ($\rho=0.29$, $p=0.22$).

Table 3A: Descriptive statistics and Pearson correlations between all study variables

	N	***M***	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1. Casper	582	-0,02	0.99								
2. Abitur	354	1.72	0.44	-.15**							
3. TMS	371	103.1	9.52	.18**	-.35**						
					(*n* = 230)						
4. HAM-Nat SC	270	0.57	1.22	.04	-.36**	.19*					
					(*n* = 242)	(*n* = 168)					
5. HAM-Nat AP	270	0.02	0.59	.08	-.16*	.34**	.27**				
					(*n* = 242)	(*n* = 168)	(*n* = 270)				
6. HAM-Nat RS	270	0.14	0.6	.23**	-.15*	.36**	.23**	.43**			
					(*n* = 242)	(*n* = 168)	(*n* = 270)	(*n* = 270)			
7. HAM-SJT	263	-0.41	0.14	.18**	-.07	.05	-.01	.08	.07		
					(*n* = 239)	(*n* = 167)	(*n* = 263)	(*n* = 263)	(*n* = 263)		
8. OSCE "history taking"	94	79.18	9.31	-.09	-.25	.09	.36	-.15	-.02	-.17	
					(*n* = 38)	(*n* = 21)	(*n* = 18)	(*n* = 18)	(*n* = 18)	(*n* = 18)	
9. OSCE "communication"	55	81.45	10.83	.08		.30					.17
						(*n* = 8)					(*n* = 55)

*p<.05, **p<.01; *N*=sample size within Casper participant population, *n*=size of subsample, *M*=mean, *SD*=standard deviation, SC=natural science subtest, AP=arithmetic problem solving subtest, RS=logical reasoning subtest

Attachment 3 to Knorr M, Mielke I, Amelung D, Safari M, Gröne OR, Breil SM, MacIntosh A. *Measuring personal characteristics in applicants to German medical schools: Piloting an online Situational Judgement Test with an open-ended response format*. GMS J Med Educ. 2024;41(3):Doc30. DOI: 10.3205/zma001685