

Table S1. Comparisons of students (Interns and students) views with items (strongly agree and agree combined)

Comparisons of students (Interns and medical students) views with items (strongly agree and agree combined)	
<i>I would consider a career in neurosurgery</i>	
Medical Students	40.2%
Interns	26.6%
<i>Neurosurgery training programs are the most competitive to get into</i>	
Medical Students	52.9%
Interns	51.0%
<i>Adventure loving persons are best suited to do neurosurgery specialization</i>	
Medical Students	41.1%
Interns	36.2%
<i>College teachers/seniors have a great influence on any students' specialization choice after MBBS.</i>	
Medical Students	65.4%
Interns	65.0%
<i>Future neurosurgical specialty job opportunities in Saudi Arabia are limited</i>	
Medical Students	34.4%
Interns	40.9%
<i>Huge prestige is attached to neurosurgery</i>	
Medical Students	71.1%
Interns	71.9%
<i>Neurosurgeons are intelligent</i>	
Medical Students	74.1%
Interns	68.0%
<i>Neurosurgeons are well paid</i>	
Medical Students	54.9%
Interns	56.3%
<i>Neurosurgeons need excellent manual dexterity</i>	
Medical Students	83.7%
Interns	78.6%
<i>Neurosurgeons need to be emotionally detached from their patients</i>	
Medical Students	35.2%
Interns	43.0%
Neurosurgery is a depressing specialty	
Medical Students	38.7%
Interns	44.0%
<i>Neurosurgery is a dying specialty</i>	

Medical Students	29.4%
Interns	32.0%
Neurosurgery is a male specialty	
Medical Students	24.4%
Interns	25.3%
<i>Neurosurgery is an important subject</i>	
Medical Students	95.6%
Interns	94.3%
Neurosurgery is an interesting specialty	
Medical Students	78.1%
Interns	75.8%
<i>Neurosurgery is more about technical skill than academic knowledge</i>	
Medical Students	43.7%
Interns	40.9%
<i>Neurosurgery is/was taught as part of my undergraduate medical degree</i>	
Medical Students	55.2%
Interns	65.6%
Neurosurgery requires a long training period	
Medical Students	89.0%
Interns	87.2%
<i>Neurosurgery requires long operating hours</i>	
Medical Students	85.1%
Interns	88.5%
<i>Neurosurgery rotation should be a compulsory rotation in internship</i>	
Medical Students	45.1%
Interns	25.8%
<i>Neurosurgery should be taught as part of an undergraduate medical degree</i>	
Medical Students	70.3%
Interns	71.1%
<i>Neurosurgical illnesses are challenging and interesting</i>	
Medical Students	84.1%
Interns	81.3%
<i>Neurosurgical treatment does not cure the patients most of the times</i>	
Medical Students	34.8%
Interns	40.9%
<i>Work as a neurosurgery specialist can impede family life</i>	
Medical Students	60.5%
Interns	63.0%

Table S2. Comparisons between interns who have neurosurgery exposure vs. interns who did not have exposure to neurosurgery.

Item	Yes (have exposure)			Have no exposure			p-value
	Mean	N	Std. Deviation	Mean	N	Std. Deviation	
Adventure loving persons are best suited to do neurosurgery specialization	3.4	163	1.0	3.3	432	.9	0.16
College teachers/seniors have a great influence on any students' specialization choice after MBBS.	3.7	163	1.1	3.7	432	1.0	0.98
Future neurosurgical specialty job opportunities in Saudi Arabia are limited	3.3	163	1.1	3.4	432	.9	0.73
Huge prestige is attached to neurosurgery	3.9	163	.9	4.0	432	.9	0.28
I would consider a career in neurosurgery	2.9	163	1.3	2.7	432	1.3	0.11
Neurosurgeons are intelligent	3.9	163	1.0	3.9	432	.9	0.99
Neurosurgeons are well paid	3.7	163	1.0	3.7	432	1.0	0.83
Neurosurgeons need excellent manual dexterity	4.0	163	.9	4.1	432	.9	0.10
Neurosurgeons need to be emotionally detached from their patients	3.3	163	1.2	3.2	432	1.1	0.18
Neurosurgery is a depressing specialty	3.5	163	1.1	3.3	432	1.1	0.08
Neurosurgery is a dying specialty	2.9	163	1.2	3.0	432	1.1	0.29

Neurosurgery is a male specialty	2.5	163	1.3	2.5	432	1.3	0.76
Neurosurgery is an important subject	4.4	163	.9	4.6	432	.6	0.01
Neurosurgery is an interesting specialty	3.9	163	1.0	3.9	432	1.1	0.47
Neurosurgery is more about technical skill than academic knowledge	3.2	163	1.3	3.2	432	1.2	0.91
Neurosurgery is/was taught as part of my undergraduate medical degree	3.9	163	.9	3.7	432	1.1	0.01
Neurosurgery requires a long training period	4.2	163	.8	4.3	432	.7	0.39
Neurosurgery requires long operating hours	4.3	163	.8	4.3	432	.7	0.61
Neurosurgery rotation should be a compulsory rotation in internship:	2.9	163	1.2	2.9	432	1.3	0.93
Neurosurgery should be taught as part of an undergraduate medical degree	4.0	163	.9	3.8	432	1.1	0.10
Neurosurgery training programs are the most competitive to get into.	3.5	163	1.1	3.5	432	1.1	0.75
Neurosurgical illnesses are challenging and interesting	4.0	163	.9	4.0	432	.9	0.57
Neurosurgical treatment does not cure the patients most of the times	3.2	163	1.1	3.2	432	1.1	0.80
Work as a neurosurgery specialist can impede family life	3.8	163	.9	3.8	432	.8	0.86

Would you be interested in taking an elective rotation in neurosurgery to get more exposure of the neurosurgery specialty?	1.6	163	.5	1.6	432	.5	0.42
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Table S3. Comparisons between Students who have neurosurgery exposure vs. students who did not have exposure to neurosurgery.

Item	Yes (Have Exposure)			No (No Exposure)			p-value
	Mean	Frequency	SD	Mean	Frequency	Std. Deviation	
Adventure loving persons are best suited to do neurosurgery specialization	3.237	232	1.006	3.361	546	0.940	0.101
College teachers/seniors have a great influence on any students' specialization choice after MBBS.	3.871	232	1.011	3.683	546	1.080	0.024
Future neurosurgical specialty job opportunities in Saudi Arabia are limited	3.233	232	1.064	3.342	546	0.978	0.164
Huge prestige is attached to neurosurgery	3.970	232	0.918	4.051	546	0.899	0.251
I would consider a career in neurosurgery	2.677	232	1.452	2.952	546	1.374	0.012
Neurosurgeons are intelligent	3.819	232	0.977	4.029	546	0.875	0.003
Neurosurgeons are well paid	3.728	232	1.032	3.736	546	1.017	0.922
Neurosurgeons need excellent manual dexterity	4.017	232	0.949	4.192	546	0.870	0.013

Neurosurgeons need to be emotionally detached from their patients	3.086	232	1.217	3.097	546	1.199	0.908
Neurosurgery is a depressing specialty	3.250	232	1.104	3.223	546	1.127	0.762
Neurosurgery is a dying specialty	2.871	232	1.136	2.982	546	1.175	0.224
Neurosurgery is a male specialty	2.582	232	1.362	2.385	546	1.343	0.062
Neurosurgery is an important subject	4.552	232	0.662	4.553	546	0.718	0.982
Neurosurgery is an interesting specialty	3.892	232	1.053	4.068	546	1.057	0.034
Neurosurgery is more about technical skill than academic knowledge	3.177	232	1.173	3.158	546	1.233	0.840
Neurosurgery requires a long training period	4.284	232	0.759	4.348	546	0.752	0.283
Neurosurgery requires long operating hours	4.224	232	0.745	4.324	546	0.729	0.082
Neurosurgery rotation should be a compulsory rotation in internship:	2.978	232	1.327	3.172	546	1.278	0.056
Neurosurgery should be taught as part of an undergraduate medical degree	4.086	232	0.940	3.842	546	1.091	0.003
Neurosurgery training programs are the most competitive to get into.	3.366	232	1.124	3.604	546	1.094	0.006
Neurosurgical illnesses are	4.099	232	0.880	4.093	546	0.882	0.934

challenging and interesting							
Neurosurgical treatment does not cure the patients most of the times	2.974	232	1.116	3.176	546	1.071	0.018
Work as a neurosurgery specialist can impede family life	3.849	232	0.862	3.777	546	0.893	0.295
Would you be interested in taking an elective rotation in neurosurgery to get more exposure of the neurosurgery specialty?	1.578	232	0.495	1.498	546	0.500	0.043

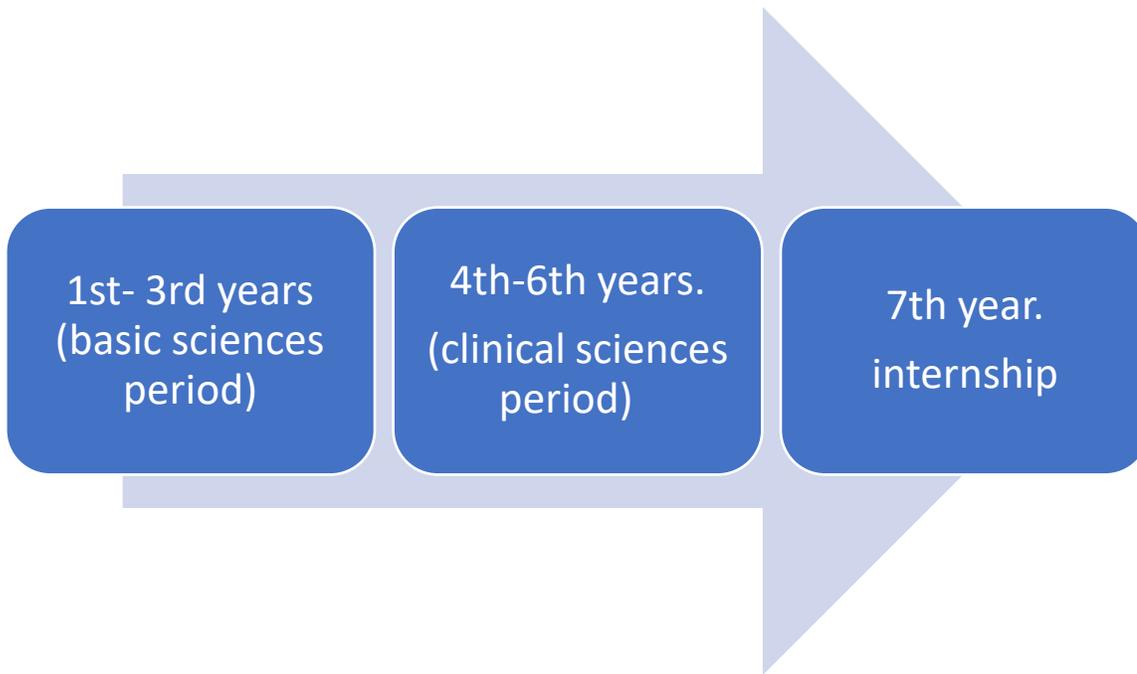


Figure S1. diagram shows the 7-year-pathway of medical students in Saudi Arabia after graduation from high school.