Titles, Money or Academics: What Drives the Orthopaedic Surgeon in India-Tracing the Happiness and Productivity of Indian Orthopaedic Surgeons

Saijyot Raut^{1,2}, Tushar Agrawal^{3,4}, Rajendra Sakhrekar^{5, 6}

Abstract

Background- Happiness and productivity are two interlinked parameters. Orthopaedic surgery is physically demanding, and often orthopaedic surgeons need to work for long unpredictable hours. In this study, the factor impacting the happiness and success of orthopaedic surgeons will be delineated. Moreover, we will try to address different characteristic features of orthopaedic practice at different geographical locations of the country.

Material and methods- This is a randomized cross-sectional survey that was conducted among practicing 0rthopaedic surgeons from Tier 1, Tier 2, and Tier 3 cities of India. We hypothesized that an annual income of Indian Rupees Four Lakhs would be likely to contribute positively to an orthopaedic surgeon's productivity. Additionally, we hypothesized that surgeons involved in research, teaching, and conferences would be more likely to be satisfied with their personal and professional life. Participants were selected through random sampling and a questionnaire was sent to them that explored the personal and professional happiness of the participants. This questionnaire was made by four surgeons from differing backgrounds with respect to age, training, city of practice and area of interest and was subsequently reviewed by four peers. The questionnaire contains a total of 18 questions that covered a wide range of characteristics including age, marital status, practice characteristics, quality oflife, calorie intake, exercise frequency, burnout, career satisfaction, and monetary satisfaction.

Result- A total of 298 participants were responded in the survey. Among these participants 135 (45.3%) were from Mumbai, 86 (28.86%) were from Bangalore and 77 (25.84%) were from UP. The happiness quotient of orthopaedic surgeons was shown to be significantly associated with the city where they practiced (p-value=0.004), age of the surgeons (p-value=0.001), the setup of postgraduate training (P-value=0.004), and the frequency of physical exercise (P-value=0.019). Among the respondents 71.81% were found to have completed their training from a government hospital and 79.05% were found to be happy in their present life. However no statistically significant difference in happiness was observed between surgeons who had undergone training abroad and those that hadn't among the respondents. It was also reported that surgeons associated with teaching institutions expected a lower salary and this association was also found to be statistically significant (P Value=0.038).

Conclusion- This study reported that practice in a Tier 1 city, age greater than 60 years, post-graduate training in a government institute, higher frequency of physical exercise (thrice a week to daily), the consciousness of daily caloric intake, and an involvement in the organization and management of major conferences and other academic and research activities were some of the factors that contributed to the happiness of orthopaedic surgeons in India.

Keywords: Happiness, Orthopaedic surgeon, Age, Productivity, Exercise

Introduction

Orthopaedics is one of the most wonderful, amazing, and highly rewarding surgical branches in field of medicine. We as an orthopaedic surgeon, do most rewarding work and it is the mission of an every orthopaedic surgeon to make great change in our patients life by fixing painful and debilitating fractures, replacing painful arthritic joints and getting back patients in motion, correcting severe deformities of spine and extremities, decompressing and fixing the painful pinched nerves and spinal cord, excise life threatening tumors, take away acute as well as long standing chronic pain, restore

¹One Spine Clinic, Mumbai, Maharashtra, India.

²Department of Orthopaedics, SL Raheja Hospital, Mumbai, Maharashtra, India.

³Department of Orthopaedics, Aastha Hospital, Mumbai, Maharashtra, India.

⁴Department of Orthopaedics, MGM Hospital, Navi Mumbai, Maharashtra, India.

⁵Division of Orthopaedic Surgery, The Hospital for Sick Children, Toronto, ON, Canada.

⁶Division of Orthopaedic Surgery, University of Toronto, Toronto, Canada.

Address of Correspondence

Dr. Rajendra Sakhrekar

Division of Orthopaedic Surgery, University of Toronto, The Hospital for Sick Children, 555 University Avenue, Toronto, ON, Canada MSG 1X8. E-mail: raj.sakhrekar@gmail.com

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Table 1: Association of c	lifferent attri	ibutes with	happiness			
		How would you describe your present life?		Total		
		Not Happy	Нарру		p-Value	Significance
	MUMBAI	81(41.97)	54(51.43)	135(45.3)		
AREA	BANGALORE	68(35.23)	18(17.14)	86(28.86)	0.004	Significant
	UP	44(22.8)	33(31.43)	77(25.84)		
Total		193(100)	105(100)	298(100)		
		How would your pre	you describe sent life?	Total		
		Not Happy	Нарру		p-Value	Significance
	≤ 30-40 years	89(46.11)	30(28.57)	119(39.93)		
	41-50 years	61(31.61)	44(41.9)	105(35.23)		
What is your age?	51-60 years	33(17.1)	15(14.29)	48(16.11)	0.001	Significant
	Above 60 years	10(5.18)	16(15.24)	26(8.72)		
Total		193(100)	105(100)	298(100)		
		How would you describe your present life?		Total		
		Not Happy	Нарру		p-Value	Significance
	Divorced	3(1.55)	2(1.9)	5(1.68)		Not Significant
Are you married?	No	7(3.63)	4(3.81)	11(3.69)	0.971	
	Yes	183(94.82)	99(94.29)	282(94.63)		
Total		193(100)	105(100)	298(100)		
		How would your pre	you describe esent life?	Total		
		Not Happy	Нарру		p-Value	Significance
	0-10	176(91.19)	91(86.67)	267(89.6)		Ū
How many publications do	11-20	10(5.18)	6(5.71)	16(5.37)	0.47	Not
you have?	21-30	4(2.07)	5(4.76)	9(3.02)	0.47	Significant
	Above 30	3(1.55)	3(2.86)	6(2.01)		
Total		193(100)	105(100)	298(100)		
		How would you describe your present life?		Total		
		Not Happy	Нарру		p Value	Significance
Are you a teacher of any fellowship training or	No	133(68.91)	68(64.76)	201(67.45)	0.465	Not
leacning program?	Yes	60(31.09)	37(35.24)	97(32.55)		
Total		193(100)	105(100)	298(100)		
		11	and a second second second second			

		How would you describe your present life?		Total	Column4	Column5	
		Not Happy	Нарру		p-Value	Significance	
	May be	46(23.83)	22(20.95)	68(22.82)			
given a chance, will you head any public	No	27(13.99)	21(20)	48(16.11)	0.39	Not Significant	
association of institution?	Yes	120(62.18)	62(59.05)	182(61.07)			
Total		193(100)	105(100)	298(100)			
		How would you describe					
		your present life?		Total			
		Not Happy	Нарру		p Value	Significance	
Have you been part of an organizing	No	108(55.96)	44(41.9)	152(51.01)	0.02	Significant	
committee of any major conterence?	Yes	85(44.04)	61(58.1)	146(48.99)			
Total		193(100)	105(100)	298(100)			
		How would you describe your present life?		Total			
		Not Happy	Happy		p Value	Significance	
	30-40 hours	8(4.15)	9(8.57)	17(5.7)			
	41-50 hours	45(23.32)	16(15.24)	61(20.47)			
low many hours a week do you work for?	51-60 hours	62(32.12)	31(29.52)	93(31.21)	0.087	Not Significant	
	61-70 hours	42(21.76)	19(18.1)	61(20.47)			
	More than 70 hours	36(18.65)	30(28.57)	66(22.15)			
Total		193(100)	105(100)	298(100)			
		How would you describe your present life?		Total			
		Not Happy	Happy		p Value	Significance	
given the chance to go back and choose another career path, would you change	No	117(60.62)	83(79.05)	200(67.11)	0.001	Significant	
your career path	Yes	76(39.38)	22(20.95)	98(32.89)			
Total		193(100)	105(100)	298(100)			
		How would you describe your present life?		Total			
		Not Happy	Happy		p Value	Significance	
ccording to you how much should be the monthly income of a successful Orthopaedic surgeon?	4-6 lakhs	62(32.12)	31(29.52)	93(31.21)		Not Significant	
	6-8 lakhs	44(22.8)	25(23.81)	69(23.15)	0.07 14	jj .	
	8-10 lakhs	37(19.17)	19(18.1)	56(18.79)			
	Above 10 lakhs	50(25.91)	30(28.57)	80(26.85)			
Total		193(100)	105(100)	298(100)			

				How would you de	scribe					
			your present life?		Total		tal		0	
				Not Happy		Нарр	ру		p Value	Significance
Do you think the ability to charge high fees is a benchmark of being a successful Orthopaedic surgeon?		No		139(72.02) 8		84(8	(80) 223(74.83)		0.129	Not Significa
		Yes		54(27.98)		21(2	0) 75(2	5.17)		
Total				193(100)		105(1	00) 298(100)		
			vour present life?				Total			
				lat Hanny	1.1m		rotai		n Value	Cignifican
				чог парру	па	рру			p value	Significan
In which setup have you completed your post	GOVER	NMENT	1	131(67.88)	83(79.05)		214(71.81)		0.004	Significa
graduation training?	PRIV	ATE		62(32.12)	22(2	0.95)	84(28.1	9)		
Total				193(100)	105(100)	298(100	D)		
			How we you	ould you describe r present life?			Total			
			1	Not Happy	Ha	рру			p Value	Significan
	Nev	ver		75(38.86)	27(2	5.71)	102(34.2	23)		
How much time have you	6 mo	nths		78(40.41)	47(4	4.76)	125(41.9	95)		
undergone training abroad	1 ye	ear		9(4.66)	9(8	.57)	18(6.04	4)	0.215	Not Signifi
TOP?	1.5 y	ears		6(3.11)	3(2	.86)	9(3.02)		
	2 ye	ars		6(3.11)	5(4	.76)	11(3.69	9)		
	More than	n 2 years		19(9.84)	14(1	3.33)	33(11.0	7)		
Total				193(100)	105(100)	298(100	D)		
			How we you	ould you describe r present life?			Total			
				Not Happy	Ha	рру			p Value	Significan
	Nev	ver		49(25.39)	14(1	3.33)	63(21.1	4)	0.019	Significa
low often do vou exercise?	Once a	week		28(14.51)	11(1	0.48)	39(13.0	9)		
	3 times	a week		63(32.64)	36(3	4.29)	99(33.2	2)		
	Dai	ily		53(27.46)	44(4	1.9)	97(32.5	5)		
Iotal				193(100)	105(100)	298(10)	U)		
		_								
			How we	r present life?			Total			
			1	Not Happy	Ha	рру			p Value	Significan
Are you conscious of your	No	0		84(43.52)	28(2	6.67)	112(37.5	58)	0.004	Significa
daily calorie intake?	Ye	IS	1	109(56.48)	77(7	3.33)	186(62.4	12)	5.001	Cigililloui
Total				193(100)	105(100)	298(100	D)		

mobility and walking, get kids and sports person back onto the playing field. As an orthopaedic surgeon we should be extremely grateful and happy about our rewarding profession. Happiness or the concept of happiness has been a central part of human culture starting from the days of the Greek philosophers. It is a more subjective measure that includes an abstract and objective measurement of one's well being [1]. Happiness and productivity are interrelated and are dependent on many factors like money, success, or fame. Success is the ultimate word that drives all of us in our personal and professional life. However, this criterion is not always synonymous with happiness. This longing for success is highly subjective with respect to the place of practice of physicians. The demography highly influences the happiness quotient and success of the physician as the pattern of practice, characteristics of patients, and associated factors vary with change in location. Success has been defined in different ways in different literature and different scholars [2].

In India medical professionals are believed to be highly successful people. The choice of surgical specialties has become popular among medical students due to its high societal esteem and the associated aura of success. In the medical profession as there are several specialties available, students perform a thorough analytical survey regarding the size of the practice, economic advantages, happiness quotient of a particular specialty before embracing one as their lifelong career. Despite many virtues, a career in orthopaedics and its associated fields occasionally demands high degrees of hard work and dedication, making it a stressful path [3].

The challenges in training and practice that a surgeon may face lead to personal distress and significant burnout, affecting their eventual

degree of success. The stress during residency and training in surgical disciplines leads to adverse effects such as sleep deprivation, little control over work-life balance, depression, chronic anger, cynicism, drug and alcohol abuse, loneliness, suicidal tendency, marital disruption, cognitive impairment, etc. The resident's well-being highly affected patient care and patient safety [4].

In this study, the factor impacting the happiness and productivity of orthopaedic surgeons will be delineated. Moreover, we will try to address different characteristic features of orthopaedic practice at different geographical locations of the country. The study will be based on a survey questionnaire that will try to address different facets of orthopaedics practice that may influence the happiness of the physician regarding their clinical practice and personallife.

Material and methods

This is a randomized cross-sectional survey that was conducted among practising orthopaedic surgeons from Tier 1, Tier 2, and Tier 3 cities of India. Random sampling was done to select the participants for the survey and the questionnaire was sent to them that explores the avenues personal, professional, and subjective happiness of the participants. Before starting the study approval for the project from the institutional review committee was obtained. We hypothesized that an annual income of Indian Rupees Four Lakhs would be likely to contribute positively to an orthopaedic surgeon's productivity. Additionally, we hypothesized that surgeons involved in research, teaching, and conferences would be more likely to be satisfied with their personal and professional life.

Survey questionnaire and administration

The survey questionnaire was developed through thorough discussion. This questionnaire was made by four surgeons from differing backgrounds with respect to age, training, city of practice and area of interest and was subsequently reviewed by four peers. The questionnaire contains a total of 18 questions that covered a wide range of characteristics including age, marital status, practice characteristics, quality of life, calorie intake and exercise frequency, burnout, career satisfaction, and monetary satisfaction.

The participants were selected randomly across three cities in India. Participants were invited through email and a link containing the survey questionnaire as a Google form. A cover letter describing the purpose of the survey also sent for a better understanding of the participants. The consent form was sent along with a survey asking participants to provide consent before they continue for the survey. Up to 3 email reminders were sent to complete the survey.

Statistical analysis

Data collection, recording, and storage were done in Google forms. Pearson's Chi-square test was done to identify the factors responsible for happiness and productivity in Orthopaedic doctors. The results were significant at p-value < 0.05.

Results

General characteristics of respondents

A total of 298 participants were responded in the survey. Among these participants 135 (45.3%) were from Mumbai, 86 (28.86%)

Table 2: Cor	relation b	etween gov	/ernmer	nt/pi	rivate training and expec	tatio	on of a successi	iul	
orthopaedic	surgeon								
	AR	EA			In which setup have you graduation tr	Total			
					GOVERNMENT		PRIVATE		
		4-6 lakhs		ths	19		14	33	
					21.10%		32.60%	24.80%	
	According	to you how	6-8 lak	ths	23		11	34	
	monthly i	ncome of a			25.60%		25.60%	25.60%	
MUMBAI	succ	essful	8-10 la	khs	17		6	23	
	Orthopaedic surgeon?		A	40	18.90%		14.00%	17.30%	
			lakhs		31		12	43	
					34.40%		27.90%	32.30%	
	To	otal			90		43	133	
					100.00%		100.00%	100.00%	
			4-6 lak	ths	19		18	37	
	According	to you how			37.30%		51.40%	43.00%	
	much she	ould be the	6-8 lak	ths	10		6	16	
	monthly i	ncome of a			19.60%		17.10%	18.60%	
DANGALONE	SUCC	essful	8-10 la	khs	6		6	12	
	Onnopaec	lic surgeon?	Abovo	10	11.80%		17.10%	14.00%	
			lakh	s	16		5	21	
					31.40%		14.30%	24.40%	
	To	otal			51		35	86	
					100.00%		100.00%	100.00%	
		4-6 lakhs		21		1	22		
	According to you h				29.60%		20.00%	28.90%	
		to you how	6-8 lak	ths	23.90%		0	17	
UP	much she monthly i	onthly income of a		kho	23.90%		0.00%	22.40%	
	succ	essful	ssful		25 40%		60.00%	27 60%	
	Orthopaed	lic surgeon?	Above	10	23.4076			21.0070	
			lakhs		15		1	16	
					21.10%		20.00%	21.10%	
	To	otal			71		5	76	
					100.00%		100.00%	100.00%	
			4-6 lak	ns	59		33	92	
			6 9 104	che	27.80%		39.80%	31.20%	
	According	to you how	0-014	115	23.60%		20.50%	22 70%	
Total	monthly i	ncome of a	8-10 la	khs	41		15	56	
	succ	essful	5.010		19.30%		18.10%	19.00%	
	Orthopaed	lic surgeon?	Above	10	0 60		18	80	
			lakh	s	02	18		07.40%	
		tal			29.20%		21.70%	27.10%	
	10	otai			212		83	295	
					100.00 %		100.0078	100.00 %	
p Value			Significance		Test Us	ed			
MUM	BAI	0.507	7	Not Significant		Pearson Chi-Square			
BANGA	LORE	0.269	Ð	Not Significant		Fisher's Exact Test			
UP		0.4		No	ot Significant	Fisher'sA Exact Test			
Total 0.233		0.233		Not Significant			Pearson Chi-Square		

Table 3: Correlation between the teaching profession and expectation of salary of a successful orthopaedic surgeon

	Are you a te fellowship train progr	Total					
	No	Yes					
	4-6 lakhs	57	36	93			
According to you how much should be the	4-0 101013	28.60%	37.10%	31.40%			
	6-8 lakhs	46	21	67			
		23.10%	21.60%	22.60%			
successful Orthopaedic	8-10 lakhs	41	15	56			
surgeon?		20.60%	15.50%	18.90%			
	Above 10	55	25	80			
	lakhs	27.60%	25.80%	27.00%			
Tatal	199	97	296				
TOTAL	100.00%	100.00%	100.00%				
B Value 0.029 using Bearson's Chi Square Test (Significant)							

ong

Table 4: City-wise difference in expectation salary of a happy orthopaedic surgeon								
		Total						
	MUMBAI	BANGALORE	UP	TOTAL				
	1-6 lakhs	34	37	22	93			
	4-0 18113	25.40%	43.00%	28.90%	31.40%			
According to you how much	6-8 lakhs	34	16	17	67			
should be the monthly		25.40%	18.60%	22.40%	22.60%			
income of a successful	8-10 lakhs	23	12	21	56			
Orthopaedic surgeon?		17.20%	14.00%	27.60%	18.90%			
	Above 10 lakhs	43	21	16	80			
		32.10%	24.40%	21.10%	27.00%			
Total		134	86	76	296			
TOTAL	100.00%	100.00%	100.00%	100.00%				
P-Value 0.467 using Pearson's Chi-Square Test (Not Significant)								
Table 5: Correlation between 'hours of work' and 'practice of exercising often'								

			41-50 hours	51-60 hours	61-70 hours	More than 70 hours	Total
	Novor	3	11	14	18	17	63
	Never	17.60%	18.00%	15.10%	29.50%	25.80%	21.10%
	Onco a wook	0	6	17	5	11	39
How often do	Once a week	0.00%	9.80%	18.30%	8.20%	16.70%	13.10%
you exercise? 3 times	3 times a	3	26	31	24	15	99
	week	17.60%	42.60%	33.30%	39.30%	22.70%	33.20%
	Deily	11	18	31	14	23	97
	Dally	64.70%	29.50%	33.30%	23.00%	34.80%	32.60%
Total		17	61	93	61	66	298
		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
P Value 0.039	using Fisher's	s Exact Test (Significant)				

were from Bangalore and 77 (25.84%) were from Lucknow, UP. When asked whether they are happy in their present life 51.43% of Mumbai doctors said that they are happy. Only 31.43% doctors from UP and 17.14% doctors from Bangalore said that they feel happy in their present life.

This happiness quotient of orthopaedics doctors was shown to be associated significantly with the city where they practice (p-value= 0.004). There was also a statistically significant association was observed between the age of surgeons with happiness (p-value=0.001). Most doctors (41.9%) who said that they are happy belonged to the age group between 41 years to 50 years. Interestingly most surgeons in their 30s did not report to be happy in their present life. Most of the doctors were married (94.63%) and only 1.685% were divorced. The rest of the survey participants were unmarried. No statistically significant association was observed between

happiness and marital status (P-value=0.971) (Table 1).

Professional achievements, success, and happiness

Most of the orthopaedics surgeons (67.11%) opined that if given an option to change the career path they do not want to change the profession and 79.05% said that they are happy in their profession and what they were doing now. This criterion was found to be statistically significant with happiness (P-value=0.020). Interestingly most of the doctors said that charging a higher fee is not the benchmark of success. The setup of postgraduate training was shown to be significantly associated with happiness (P-value=0.004). Among the respondents 71.81% were found to have completed their training from a government institution and 79.05% were found to be happy in their present life. However no statistically significant difference was observed between training abroad and happiness among the respondents (Table 2).

Academic achievements and happiness

Most the orthopaedic surgeons (89.6%) had publications in

numbers ranging from 0 to 10. Only 2.01% had more than 30 publications. Among the 298 participants 32.55% were associated with teaching and training programs and 61.07% said that given a chance they want to head a department in a public or private institution. 51.01% participants said they were never part of any organizing committee of any major conference and 48.99% were active members of the organizing committees of such events. It was observed that being part of the organizing committees of these conferences was positively associated with happiness.

In the study 31.21% of the respondents said that they work for 51-60 hours a week, followed by 22.15% who said they work for more than 70 hours of which 12.18% work for more than 100 hours per week and only 5.7% said they work for 30-40 hours a week. The orthopaedic surgeons working for more than 100 hours per work are mostly younger trainee surgeons pursuing either residency or fellowships or within 2 years of completion of residency.

Interestingly, association of academic achievements such as the number of publications and associations with any training or teaching programs was not found to correlate with the happiness in the study participants. When asked if participants wanted to participate more in academic achievements like research publications and teaching younger surgeons or accepting the opportunity to head the department in any private or public institute most of the participants expressed their willingness and desire, however, no association was found between happiness and this parameter. Also, surprisingly, no significant difference was observed between city-wise expectations regarding the salary of a happy orthopaedic surgeon (Table 3).

Exercising, calorie intake, and happiness

Happiness was shown to be associated with exercising frequency (P-value=0.019). 33.22% of people said they exercise 3 times a week and 32.55% said they exercise daily. Only 21.14% said they never exercise and 13.09% said they exercised once a week. When asked if they are conscious about their calorie intake 62.42% responded positively and 37.58% were not concerned. This parameter was associated with the happiness of the orthopaedic surgeons.

Moreover, it was also observed that surgeons with lower work hours exercise more often and this correlation was found to be statistically significant (P-value=0.004). 64.7% of the respondents who exercised daily usually worked for 30-40 hours a week. On the other hand, only 34.8% of orthopaedic surgeons who exercised daily practiced for more than 70 hours in a week. Among Doctors who worked for 61-70 hours, 29.8% never exercised, 8.2% exercised once in a week, 39.3% 3 times a week, and 23% exercised daily.

Association of monthly income and success

This study also showed that depending on the city where doctors practiced the expectation of income changes. In Mumbai almost 32.3% of doctors said that a monthly income above 10 lakhs is expected from successful orthopaedic surgeons compared to 24.4% in Bangalore and 21.1% in UP. Interestingly in Mumbai, doctors that have obtained their training from government institutions earned more compared with their private institution trained orthopaedic colleagues. A similar trend was observed in Bangalore as well as UP.

However no statistical correlation was observed between happiness, training, and income of the respondents in any of the cities included in the study. This study suggests that money is not the main driving force for the orthopaedic surgeons in their clinical practice (Table 4).

Association of sleep and success

More than 70.24% of orthopaedic surgeons claimed to have more than 6 hours of sleep and corelated sound sleep has improved their energy levels and productivity during awake time.

Intraoperative irritable behavior of 3 episodes/year

Interestingly, that intraoperative irritable behavior of 3 episodes/year for orthopaedic surgeons working more than 70 hours per week was 4.5% (3/66) while for those working less than 50 hours per week was 11.53% (9/78). Within age group, orthopaedic surgeons ages less than 40 years 3.36% (4/119) had less than 3 episodes/year of intraoperative irritable behavior while age group more than 50 years reported to have 10.41% (5/48) more than 3 episodes/year of intraoperative irritable behavior (Table 5).

While evaluating the correlation between teaching professions and the expectation of salary study results pointed out that surgeons associated with teaching positions expected a lower salary and this association was also found to be statistically significant (P Value=0.038). 27.8% of the orthopaedic surgeons who thought that earning more than 10 lakh per month is a sign of success were not associated with any teaching or fellowship program.

Discussion

Orthopaedic surgery is physically demanding, and often orthopaedic surgeons need to work for long unpredictable hours. Despite these difficulties, orthopaedics has been the choice of specialty for many students. When these obstacles are not dealt with effectively, they can pose a threat to a physician's happiness and success. Several studies have demonstrated concerning levels of burnout and psychological distress among orthopaedic surgery residents [5,6].

Like any other profession, medical professionals also strive for success. The classical definition of success according to Merriam-Webster is the attainment of eminence, wealth, or favor. Eminence can be achieved by gaining superiority. Similarly, success was also defined by Winston Churchill as the capacity to go from one failure to another with no loss of enthusiasm. The present study describes the factors that affect happiness and productivity in Indian orthopaedic surgeons. This study randomly surveyed orthopaedic surgeons across three cities in India and evaluated the effect of various factors on the happiness of the study population [2, 7].

In this survey a total of 298 orthopaedic practitioners from India participated. Most of the doctors were from Mumbai and approximately half of them said they are happy. This study reported that the practicing city, age, place of post-graduate training, frequency of exercise, detailed information regarding the daily caloric intake, and being a part of an organizing committee of a major conference affected the happiness of these professionals. However, in summary among the total 298 participants who took the survey 193 said that they are not happy in their work life.

In a report on Physician Lifestyle & Happiness it was shown that clinicians from orthopaedic discipline rank 8th among all specialties regarding their happiness outside work [8]. As addressed in AAOS orthopaedic surgeon census this happiness quotient is impacted by several demographic factors such as physician's age, sex, race/ethnicity, size of the practice, area of super-specialty, etc. The census showed that more than 90% of orthopaedic physicians are male. Recently, the number of females is increasing in the specialty showing a hope to add to the diversity. However, this trend will take a long time to reflect on the actual workforce [9].

In the present study only 67.11% of orthopaedic surgeons said that they would choose the same career path if given an option. In a previous survey conducted among 25,000 multispecialty surgeons, Shanafelt et al have reported that only 71% of the surgeons agreed to choose the same career path if they had an option. This study also reported that orthopaedic surgeons have greater career satisfaction among all the specialty surgeons. High academic rank and choice of specialization were among the factors that were associated with higher satisfaction [4].

A previous study conducted among academic orthopaedic leaders by Saleh et al has shown that long hours affected the personal life of the doctors [10]. Most of the leaders reported themselves to be workaholics. While the present study also reported a high number of respondents with long hours most of them reported a happy worklife balance. In another study conducted among departmental chairs, editors, and presidents of orthopaedic associations Klein et al have shown that most of these successful people are happy despite long hours and stressfullife [2].

Despite the existence of numerous theories and hypotheses, it is a proven fact for ages that an intention to take the very best care of the patient with high moral and ethical protocol, can make a surgeon immensely successful. The qualities like availability, communication, compassion, gentleness, love, and care for patients help a physician to achieve the success and happiness in practice. In a purpose-driven life, there are some points such as positivity, desire to excel, personal life and health, and persistence that drive physicians towards the pinnacle of success. Moreover, ongoing self-analysis and criticism may help to develop a path of success for practicing physicians [11].

Overall, all these studies and the present data support that maintaining personal health and a happy work-life balance is the key to stay happy in life. This study has reported that money is not the driving force to become a successful surgeon. Rather people who are in academics are happier and they expect lower salaries. Although there was no association reported between monitory gains and happiness, respondents who expected lower monthly incomes were happier compared to participants who expected higher monthly incomes.

Recent clinical studies defined the clinically significant burnout as the presence of either high level emotional exhaustion or high-level depersonalisation [12, 13].

As Orthopaedic surgeons, we always had competitive and

demanding life right from the student years and that's what got us here. As a practicing surgeon, we need to master and cover broad anatomy right from occiput-cervical levels to toes, need to deal with complex life-threatening traumas, tumors and various pathologies and hone wide range of surgical skills. Orthopaedic surgery is a physically as well as mentally demanding job with huge workload, long working hours and long learning curve leading to burnouts.

With new challenges of demands of the super-sub specialization, with change of healthcare to revenue producing health system, Orthopaedic surgeons are losing autonomy to hospital administrators. With wide spread of social media and internet it has become easier to get distracted, compare ourselves with our professional medical and non-medical collogues and friends, predisposing us to stress, depressions and burnouts.

Several studies demonstrated burnout is affecting as nearly as half of all Orthopaedic surgeons affecting surgeons' life, patient care and family [14-16]. Various studies [17, 18] and also the participants in this study suggested that to overcome and win over burnout they used several methods varying from meditation, yoga, walking and jogging, gym exercises, participating in their loved sports, fixing time and duration of sleep, spending time with their loved family, friends and pets, taking regular break for work, travelling and visiting places has provided them relief from burnout.

As a mission of an Orthopaedic surgeon, we need to priorities our energy and time for giving best performance during patient care as well as personal and family care.

Limitations

The main limitation of this study is the number of study participants that cannot exclude a nonresponder bias. Secondly the questionnaire used in this study was taken up from different articles and send to 15 surgeons for validation and then used in this study. Also, the questionnaire was made to cover a wide breadth of topics. Moreover, as there is a lack of literature that can provide an insight into the characteristics of happy and successful orthopaedic doctors in India a comparative study was not possible to validate the findings of this study.

Despite the above-mentioned limitations to our knowledge ours is the first study that has evaluated the factors that affect the happiness and productivity among practicing orthopaedic surgeons in India.

Conclusion

This study reported that practice in a Tier 1 city, age greater than 60 years, post-graduate training in a government institute, higher frequency of physical exercise (thrice a week to daily), the consciousness of daily caloric intake, and an involvement in the organization and management of major conferences and other academic and research activities were some of the factors that contributed to the happiness of orthopaedic surgeons in India.

Declaration of patient consent : The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his/her consent for his/her images and other clinical information to be reported in the Journal. The patient understands that his/her name and initials will not be published, and due efforts will be made to conceal his/her identity, but anonymity cannot be guaranteed.

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