

Financial Literacy Rate of Orthopaedic Resident Doctors: A Cross-sectional Study

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Abstract

Background: Healthy financial practices directly affect the financial well-being of an individual, and subsequently the quality of life. Paucity of financial literature in young Indian professionals has been established before by studies that evaluated this topic subjectively. This study emphasizes on assessing the financial literacy of orthopaedic resident doctors in a developing country and ascertaining the factors affecting it to improve the same.

Methods: Total 286 resident doctors were analyzed cross-sectionally in terms of their financial knowledge, factors affecting it, financial attitude, subjective satisfaction, and thought process regarding improving this scenario. An objective, 46-question survey-based model was used from February 2023 to April 2023. All the findings were collated and analyzed.

Results: The mean financial literacy was recorded to be $53.56 \pm 17.59\%$. Age, marital status, children, population of the city, education, and occupation of parent 2 had no bearing on the financial literacy of the residents ($P > 0.05$). The socioeconomic status, retirement savings, loan/debt, and the presence of an emergency fund significantly influenced the financial literacy ($P < 0.05$). Only 22.38% were satisfied with the current financial situation and 61.89% wanted an in-person meeting with a financial advisor.

Conclusion: Orthopaedic resident doctors show low financial literacy and financial satisfaction. Significant steps need to be taken to improve financial knowledge and understanding of the investment options of these professionals to ensure the economic growth of the community.

Keywords: Financial literacy, financial knowledge, resident doctors, orthopaedics, financial well-being, financial attitude.

ACGME Competency: Systems-based Practice, Practice-based Learning and Improvement

Introduction

Medical and financial education has minimal similarities in terms of their curriculum, terminologies, and methods. However, the thought process behind the two remains the same—balancing the pros and cons of every decision for a favorable long-term outcome or salvaging an acute complication. Unfortunately, with medical training being exhaustive in terms of both time and effort, there is very little room for imparting knowledge regarding financial well-being during these courses, more so in developing countries like India. Financial literacy has broadly been described as the individual ability to make informed decisions and take calculated risks with resource allocation in

the financial market to maintain a stable, long-term financial growth [1]. While education debt is not as concerning in India as it is in the western countries, as the culture gravitates towards joint families, the Reserve of India still reported student debt amounting to Rs 1,45,785 crore as of August 2022 [2]. What makes student debt in India in the medical field, grim, is that 6.2% of the accounts that had received education loans were declared to be non-performing assets at the end of fiscal year of 2020, meaning despite investing a huge amount of time and money, more than six students out of 100 remained unemployed. This is exclusive of the fact that caste and geopolitical scenario renders even more qualified doctors under, or

unemployed in academic institutional setups [3]. With India languishing at the lower rungs of doctor-patient ratio compared to the rest of the world, there has been a rise in the number of private medical colleges to address this deficit [3].

The upward trend of the cost of medical education in India is directly correlated to this increase in private medical colleges which adds to the financial burden of the students and their family, leading to more loans and debts or foregoing of assets, especially in the educated and middle socioeconomic class [4]. This potentially aggravates further in postgraduation with a gross mismatch of seats in postgraduate residency compared to the number of graduates every year.

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There have been multiple studies across international literature establishing the lack of basic financial knowledge in medical graduates [4, 5]. A study by Bhatia and Singh [6] puts the financial knowledge rate among young Indian professionals at a mean 8.292 ± 2.323 out of 16 (51.825%), while that by Agarwal and Biswas [7] concluded that 68.3% health-care professionals in India were financially literate. Jain et al. [8] demonstrated that around 50.07% of Indian resident doctors were aware about various financial tools such as stocks, mutual funds,

tax, insurance, and indemnity. However, these studies had certain limitations in terms of either sample size, a non-specific or targeted sample group, or more subjective rather than objective questions to determine the results. It is essential to have a basic knowledge of finance management as it directly affects the eventual well-being and quality of life of a person. This becomes further important in the Indian scenario where there is no formal government-supported retirement, unemployment, or social security benefits, nor mandated

courses on financial education at most institutions and curricula.

This study was conducted to comprehensively and objectively assess the financial literacy and attitude of a specific, yet large multiregional cohort of Indian resident doctors pursuing orthopedic surgery. This being one of the first studies to analyze these parameters, we hypothesized that Indian resident doctors had low financial literacy and low levels of satisfaction with their financial status.

Materials and Methods

Sample selection

This cross-sectional study was conducted by developing a web-based, digital, 46-question anonymous survey. This survey was prepared based on the pilot questionnaire used in the parent study and was revised for the Indian population after thoroughly reviewing the literature [9]. This questionnaire was shared with 542 orthopedic resident doctors in India, through various social media platforms, after receiving due ethical clearance. The recording of survey responses was kept open for 3 months, from February 2023 to April 2023. Only the incumbent orthopedic residents of government and private medical colleges in India were included in the study. Survey responses with <80% of questions answered were excluded from the study (n=18). In addition, surveys whose responses seemed illegitimate (all questions answered with the same, single option) were excluded from the study (n=4).

Survey information

The questionnaire was essentially divided into three parts: The demographical details (10 multiple choices, single-response questions); targeted, objective questions to test the financial knowledge (16, multiple choice, single correct response questions); and subjective questions regarding current financial situations, financial health, short- and long-term plans, satisfaction, and expectations (20, multiple choice, single response questions based on Likert scale). Permission was granted to use the validated National Financial Capability Survey questions for this study by the Financial Industry Regulatory Authority Investor Education Foundation. All the questions that form the survey are based on the questions that have been validated previously in the

Table 1: Category wise assessment of mean financial literacy with level of significance (Spearman correlation)

Stratification category	n (%)	Mean financial literacy (%)	p-value
Final sample pool	286	53.56	-
Post Graduate Year			
1	102 (35.66)	52.88	0.603
2	94 (32.87)	53.72	
3	90 (31.47)	54.17	
Age			
<30 years	238 (83.21)	53.7	0.808
≥30 years	48 (16.78)	52.86	
Socioeconomic status (Modified Kuppaswamy Scale)			
Lower	39 (13.64)	51.92	0.036*
Upper lower	60 (20.98)	52.71	
Lower middle	88 (30.77)	55.11	
Upper Middle	66 (23.08)	52.96	
Upper	33 (11.54)	49.81	
Marital Status			
Married	75 (26.22)	54.23	0.894
Unmarried	211 (73.78)	53.32	
Others	0 (0.0)	-	
Children			
Children	33 (11.54)	55.86	0.432
No Children	253 (88.46)	53.26	
Credit card/ Loan debt			
Yes	42 (14.69)	42.71	0.002*
No	244 (85.31)	55.43	
Ability to come up with an emergency fund			
Yes	85 (29.72)	63.68	<0.001*
No	201 (70.28)	49.28	
Retirement savings			
Started saving for retirement	111 (38.81)	60.47	<0.001*
Have not started saving for retirement	175 (61.19)	49.18	

Table 2: Financial Literacy Survey Response Frequencies

Questions	n (%)
Satisfaction with financial situation	64 (22.38)
Spending in relation to income over prior year	
Spent less than income	199 (69.58)
Spent about the same as income	59 (20.63)
Spent more than income	28 (9.79)
Difficulty covering monthly expenses	
Very difficult	44 (15.38)
Somewhat difficult	115 (40.21)
Not at all difficult	127 (44.41)
Have an emergency fund for 3 months expenses	85 (29.72)
Started saving for retirement	111 (38.81)
Currently have student loan debt/other loan	103 (36.01)
Credit card debt/Other loan	42 (14.69)
Know about professional indemnity	
Yes	114 (39.86)
No	154 (53.85)
Practice setting after residency	
Institutional	97 (33.92)
Private Practice	54 (18.88)
Other/Further study	108 (37.76)
Undecided	27 (9.44)
Anticipated Starting Salary	
< Rs 10,000	0 (0)
Rs 10,000 to 50,000	54 (18.88)
Rs 50,001 to 1,00,000	83 (29.02)
Rs 1,00,001 to 5,00,000	134 (46.85)
Rs 5,00,001 to 10,00,000	12 (4.20)
> Rs 10,00,000	3 (1.05)
Plan to take financial coaching in the future	182 (63.64)
School/Graduate/Postgraduate program provide training in financial	
Enough	6 (2.10)
Not enough	23 (8.04)
No	257 (89.86)
Financial management training is inadequate	280 (97.90)
Practice management training is inadequate	262 (91.61)
Would like more practice management training	256 (89.51)
Accessed consultants, online information or other resources for financial education in past 6 months	73 (25.52)
What intervention would be most effective for improving financial	
Online training module	98 (34.27)
Personal finance seminar	11 (3.85)
Meeting with personal financial advisor	177 (61.89)

study by Cone et al. survey of orthopedic residents in USA, following suitable modifications by an expert in personal finance to make it relevant for the Indian scenario. The primary modification to the demographic section was the use of questions to determine the socioeconomic status of the participant based on modified Kuppaswamy scale [10, 11]. The survey can be viewed in Appendix 1 (FINRA is a registered trademark of the Financial Industry Regulatory Authority, Inc. Reprinted with permission from FINRA).

Statistical analysis

The responses were recorded and stratified anonymously from the web-based survey. The responses recording demographic details and financial literacy were calculated using descriptive statistics. All the data were analyzed using SPSS software, version 21; SPSS Inc., (Chicago, IL, USA). For measuring the reliability of the measurement model, the consistency of measurement items was checked using Cronbach's alpha. Stratified comparisons of the financial literacy (in %) were analyzed with one-way analysis of variance testing. Spearman correlation was used to assess the significance of correlation between financial literacy and various demographic factors. Significance was established at $p=0.05$. The power of the study for the sample size of 286, with financial literacy score as the dependent variable, R squared at 0.001, α at 0.05 was 70%.

Results

The response rate of the survey was 56.83% (308/542). Eighteen submissions were rejected due to inability to answer 80% of questions, and four were rejected in view of illegitimacy. The final sample size (n) was 286. The average age of participants was 28.02 ± 2.135 years. The mean financial literacy was recorded to be $53.56\% \pm 17.59$. There was an even distribution of participating residents among the three postgraduate years (PGY), 1 to 3. 75 (26.22%) participants were married, and 33 (11.54%) had children. Maximum participants belonged to the lower middle class of the modified Kuppaswamy scale (88/286; 30.77%). The detailed demographical distribution is given in Table 1.

Table 3. Survey Questions

1. What is your age?	8. What was the highest grade level completed by Parent 2?
2. What is your current post-graduate year?	a. Illiterate
a. PGY1	b. Grades 1 through 9 (Primary school)
b. PGY2	c. 10th grade (Middle school)
c. PGY3	d. 12th grade (High school)
3. What is your marital status?	e. Intermediate/Diploma
a. Married/Partner	f. Graduation/Bachelor's degree (for example: BA. BS)
b. Single	g. Professional degree
c. Separated	h. I don't know
d. Divorced	i. Single parent household
e. Widowed/widower	9. Occupation of Parent 1?
f. Prefer not to say	a. Unemployed
4. Do you currently have any children who are financially dependent on you?	b. Unskilled worker
a. Yes	c. Semi-skilled worker
b. No	d. Skilled worker
5. What is the estimated population of the city in which you currently reside?	e. Clerical, shop owner, Farmer
a. < 50,000	f. Semi-professional
b. 50,000-100,000	g. Professional
c. 100,000-250,000	10. Occupation of Parent 2?
d. 250,000-1,000,000	a. Unemployed
e. >1,000,000	b. Unskilled worker
6. What was your estimated household monthly income while growing up? (in Rupees)	c. Semi-skilled worker
a. <1502	d. Skilled worker
b. 1503-4464	e. Clerical, shop owner, Farmer
c. 4465-7441	f. Semi-professional
d. 7442-11161	g. Professional
e. 11162-14882	The following is a quiz about finances & investing:
f. 14883-29765	11. Suppose you have Rs.100 in a savings account earning 2 percent interest a year. After five years, how much would you have?
g. >29765	a. More than Rs.102
h. Don't know	b. Exactly Rs.102
i. Prefer not to say	c. Less than Rs.102
7. What was the highest grade level completed by Parent 1?	d. Don't know
a. Illiterate	12. Imagine that the interest rate on your savings account is 1 percent a year and inflation is 2 percent a year. After one year, would the money in the account buy more than it does today, exactly the same or less than today?
b. Grades 1 through 9 (Primary school)	a. More
c. 10th grade (Middle school)	b. Same
d. 12th grade (High school)	c. Less
e. Intermediate/Diploma	d. Don't know
f. Graduation/Bachelor's degree (for example: BA. BS)	13. Suppose you owe Rs.1,000 on a loan and the interest rate you are charged is 20% per year compounded annually. If you didn't pay anything off, at this interest rate, how many years would it take for the amount you owe to double?
g. Professional degree	a. Less than 2 years
h. I don't know	b. At least 2 years but less than 5 years

c. At least 5 years but less than 10 years	a. True
d. At least 10 years	b. False
e. Don't know	c. I don't know
14. A 15-year loan typically requires higher monthly payments than a 30-year loan but the total interest over the life of the loan will be less.	22. If a company files for bankruptcy, which of the following securities is most at risk of becoming virtually worthless?
a. True	a. The company's preferred stock
b. False	b. The company's common stock
c. Don't know	c. The company's bonds
15. Buying a single company's stock usually provides a safer return than a stock mutual fund.	d. Don't know
a. True	23. Which of the following best explains why many municipal bonds pay lower yields than other government bonds?
b. False	a. Municipal bonds are lower risk
c. Don't know	b. There is a greater demand for municipal bonds
16. If you buy a company's stock...	c. Municipal bonds can be tax-free
a. You own a part of the company	d. Don't know
b. You have lent money to the company	24. The principal difference between mutual fund share classes (Class A, Class B, Class C, etc.) is:
c. You are liable for the company's debts	a. The different investments each class makes
d. The company will return your original investment to you with interest	b. The different fees and expenses each class charges
e. Don't know	c. The different investment advisers in charge of managing each class
17. If you buy a company's bond...	d. Don't know
a. You own a part of the company	25. A Section 80E Plan is a tax-advantaged way to save for:
b. You have lent money to the company	a. Education
c. You are liable for the company's debts	b. Retirement
d. You can vote on shareholder resolutions	c. Long-term health care
e. Don't know	d. Don't know
18. Which type of bond is the safest?	26. You invest Rs.500 to buy Rs.1,000 worth of stock on margin. The value of the stock drops by 50%. You sell it. Approximately how much of your original Rs.500 investment are you left with in the end?
a. Government bond	a. Rs.500
b. Municipal bond	b. Rs.250
c. Corporate bond	c. Rs.0
d. Don't know	d. Don't know/Not sure
19. In general, if interest rates go down, then bond prices?	The following questions are about your current financial situation:
a. Go down	27. Overall, thinking of your assets, debts and savings, how satisfied are you with your current personal financial condition?
b. Go up	a. Extremely unsatisfied
c. Are not affected	b. Moderately unsatisfied
d. Don't know/Not sure	c. Neutral
20. A "no-load" mutual fund is one that...	d. Moderately satisfied
a. Carries no fees	e. Extremely satisfied
b. Carries no sales charges	28. Over the past year, would you say your spending was less than, more than, or about equal to your income? (Excluding large purchases-- house, car, or other big investments you may have made)
c. Does not contain high-risk securities	a. Spent less than my income
d. Has no limits on the period of time in which it can be bought and sold	b. Spent more than my income
e. Don't know/Not sure	c. Spent about the same as my income
21. In general, investments that are riskier tend to provide higher returns over time than investments with less risk	d. Don't know

29. In a typical month, how difficult is it for you to cover your expenses and pay all your bills?	f. Rs.10,00,001 to Rs.25,00,000
a. Very difficult	g. Rs.25,00,001 to Rs.50,00,000
b. Somewhat difficult	h. Rs.50,00,001 to Rs.75,00,000
c. Not at all difficult	i. Rs.75,00,001 to Rs.1,00,00,000
30. Have you purposefully set aside emergency funds that would cover your expenses for 3 months in case of sickness, job loss, economic downturn, or other emergencies?	j. > Rs.1,00,00,000
a. Yes	k. Prefer not to say
b. No	37. Do you know about professional indemnity?
31. Have you ever tried to figure out how much you need to save for retirement?	a. Yes
a. Yes, and I have started saving towards retirement	b. No
b. Yes, but I have not started saving towards retirement	38. After residency/fellowship training, in what setting do you plan on practicing?
c. No	a. Academic hospital setting/Institutional
32. Do you currently have any student loan debt? Please include all undergraduate, graduate school, and/or medical school debt.	b. Private practice
a. Yes	c. Further studies/ Additional degree acquisition
b. No	d. Don't know
33. Do you currently have any other outstanding loan?	e. Other (Please specify.)
a. Yes	39. What do you anticipate your starting monthly salary (first year out of residency) to be?
b. No	a. < Rs 10,000
34. Approximately how much do you currently owe on your loans/debts?	b. Rs 10,000 to 50,000
a. <Rs.10,000	c. Rs 50,001 to 1,00,000
b. Rs.10,000 to 50,000	d. Rs 1,00,001 to 5,00,000
c. Rs. 50,001 to Rs.1,00,000	e. Rs 5,00,001 to 10,00,000
d. Rs.1,00,001 to Rs.5,00,000	f. > Rs 10,00,000
e. Rs.5,00,001 to Rs.10,00,000	40. Do you plan to take special financial training/coaching classes in the near future?
f. Rs.10,00,001 to Rs.25,00,000	a. Yes
g. Rs.25,00,001 to Rs.50,00,000	b. No
h. Rs.50,00,001 to Rs.75,00,000	41. Did your school/ graduate/ postgraduate program provide training in financial management? (debt management/investment/life insurance/Mediclaim/student loan, etc)
i. Rs.75,00,001 to Rs.1,00,00,000	a. Yes, enough
j. Rs.1,00,00,001 to Rs.5,00,00,000	b. Yes, but not enough
k. Rs.5,00,00,001 to Rs.10,00,00,000	c. No
l. > Rs.10,00,00,000	42. Is the financial management training you get adequate? Please check all that apply.
m. Prefer not to say	a. Not adequate
35. Do you currently have any loan/debt (including credit card) that you will not pay off at the end of the month?	b. Adequate
a. Yes	c. Too much
b. No	d. Would like more training
36. Approximately how much debt do you expect to carry over to next month?	43. Does your program provide training in practice management? Please check all that apply.
a. <Rs.10,000	a. Ancillary income
b. Rs.10,000 to 50,000	b. Partnership tracks
c. Rs. 50,001 to Rs.1,00,000	c. Contract negotiations
d. Rs.1,00,001 to Rs.5,00,000	d. Other (Please specify.)
e. Rs.5,00,001 to Rs.10,00,000	e. No

f. I don't know	a. Yes
44. Is the practice management training you get adequate? Please check all that apply.	b. No
a. Not adequate	46. What intervention do you feel would be most effective for improving financial literacy during residency?
b. Adequate	a. A personal finance seminar
c. Too much	b. A computerized training module on personal finance
d. Would like more training	c. A sit-down meeting with a personal finance advisor
45. Have you accessed consultants, online information, or other resources to educate yourself about finances in the last 6 months?	d. Other (Please specify.)

The mean financial literacy rate of Indian orthopedic residents was found to be a lowly 53.56% ($\pm 17.59\%$), as hypothesized. Further stratification in terms of demographic factors revealed similar rates across all PGY, signifying lack of improvement over the course of residency. Age, marital status, children, population of the city, education, and occupation of parent 2 had no bearing on the financial literacy of the residents. The socioeconomic status, retirement savings, loan/debt, and the presence of an emergency fund significantly influenced the financial literacy. Lower middle and upper middle socioeconomic class performed the best. Residents who had started saving for retirement and had a readily available emergency fund showed significantly better financial literacy rate, while those with student loans/ credit card debts performed worse. The significance of the correlation of individual factors is detailed in Table 1.

The subjective section of the questionnaire revealed a satisfaction rate of a mere 22.38% among the participants. One hundred and ninety-nine (69.58%) residents spent less than their income, yet 159 (55.59%) did not find making ends meet easy at their current pay scale. This retains significance since 205 (71.68%) intended to continue with low-paying propositions of working in an academic institution or going for further studies post-residency, while most participants (52.10%) expected a starting salary of over Rs 1,00,000. Precariously, close to 90% of participants received no financial training throughout their educational and professional lives, and wanted more practice management training, while under 40% were aware of professional indemnity. Despite this deficit in financial knowledge, only 73 (25.52%) participants found enough time and energy to try and improve their understanding of managing their finances,

while a majority (61.89%) urged an in-person meeting with a financial advisor to improve their financial literacy (Table 2).

Discussion

Financial education has a major role in the growth of a professional in society, as well as for quality of life. In developing countries, access to even primary institutional education is difficult due to various socioeconomic, geographical, and even demographic concerns, finance-centric education is rendered further challenging. Outside of specialized training programs in the field of commerce, medicine is considered to be one of the more prestigious training programs, as it involves rigorous intellectual engagement till its completion. This study analyses one such subspecialty of medicine training program, namely orthopedic residency, to study the rate of financial literacy and factors that influence it using a 46- question survey (Table 3).

The survey respondents showed low financial literacy rates, with dissatisfaction of their current financial situation, low enterprise toward future and contingency planning, and the need for more formal education to manage finances. As a marker for comparison, the financial literacy rate of working professional in India was found to be 51.83% (8.292/16.0) by Bhatia and Singh [6]. The financial literacy of the 286 Indian orthopedic resident doctors who responded to our survey was found to be a mean of 53.56% ($\pm 17.59\%$), thereby similar to that of the general working population in the country.

This was also similar to the findings of Ahmad et al. [4] who found the mean financial literacy rates of 422 resident doctors of the USA to be 52%, and that of Jain et al. [8] who concluded that the mean financial literacy among 215 India resident doctors

was 53.75%.

This rate was, however, lower compared to the rate of orthopedic resident doctors in the USA, which was found to be 60.9% by Cone et al. [9] signifying a possibility of further deficit of financial training models between developed and developing countries.

The study findings were further stratified by demography. There rate of financial literacy remained similar irrespective of age, marital status, and children; hence, the added responsibility of family did not coerce the residents to actively pursue financial health. There was no improvement in the literacy rate even through the postgraduate years, meaning the residents either did not receive financial training in any form, or it did not have any positive ramifications on them. On the contrary, there was a significant correlation between socioeconomic status of the respondents while growing up and their financial literacy.

The Kuppuswamy scale (2011 modification as the mean age of the respondents would have completed schooling by then based on the mean age) was used as it is a validated system of stratifying socioeconomic scale based on income, parental literacy, and the job profile of the parent, all of which has a significant bearing on the growing environment of a child [11]. It was noted that those who were brought up in middle-class families had significantly better financial literacy compared to those belonging to the lower and the upper socioeconomic class, similar to previous studies linking early exposure to fiscal responsibility with eventually improved financial awareness and responsibility in an individual [12, 13]. This could be due to the tendency of middle-class families in India to be more cautious of their spending, and be more hands-on with handling their finances, which in turn is incorporated in the growing child.

Another key finding in this study was that although the residents managed their finances well in the short-term, with 69.58% of participants spending less per month than their income, and only 15.38% finding it extremely difficult to keep up with the monthly expenses, just under 40% had started saving for retirement and <30% had saved for emergency.

Unsurprisingly, respondents who had started saving for retirement and those who had built a contingency scored significantly higher in the literacy score compared to their counterparts, thus confirming that higher financial literacy is directly correlated to active fiscal allocation in a positive manner. These trends were similar to the findings of Cone et al. [9]. This is fortified by the finding that even though over 70% of participants plan on going for further studies (equal or lesser paying than residency is most cases, and sometimes no pay) or institutional practice (fixed pay), over 50% of participants were under the impression that they would earn more than Rs. 1 lac after residency. The inference from these findings is that it is possible to save money during residency by adopting a healthy financial management lifestyle from the beginning and hence, it should be started as soon as possible rather than procrastinating it in hope for a better income, especially due the inarguably major

effect of compounding in early investors.

Due to the culture of joint families in India, wherein the need for financial independence of a person does not start as soon as they become adults, and multiple members of the family contributing to education of every child, the general rates of education loans or credit card debts is lesser compared to the USA and other developed countries [14, 15]. Even though there is a rising trend of these debts, <15% of our respondents had any kind of pending credit card debt and 36% had education loan, correlating the findings of Jain et al. [8].

However, the financial literacy of these 15% was found to be significantly lower than those who did not have any debt, suggesting that it could be a sign of unhealthy financial practices [9]. A concerning finding of this survey was that not even 40% of the Indian orthopedic residents were aware about professional indemnity. When analyzing this with the findings of Jain et al., wherein only 11.2% of residents had professional indemnity, it is a major, potentially debilitating factor in personal and professional fiscal security considering that Bono et al. predicted in 2022 [16] based on their findings that 1 in every three clinicians was expected to be sued at least once through their career.

Importantly, this void in literacy is not due to

the lack of will of the resident doctors. There is a general understanding of their lack of financial knowledge and the urge to improve it despite the professional burnout. This was derived from the responses showing that just over 20% were satisfied with their current financial situation, and although just over 25% found the time to educate themselves about managing their money, almost two in every three individuals planned on taking matters into their own hands by taking dedicated financial coaching after residency.

Conclusion

Orthopaedic resident doctors show a concerning low rate of financial literacy, secondary to receiving close to no institutional education in the same, throughout their professionally formative years. This led to them having a high rate of dissatisfaction with their current financial situation, along with uncertainty over future investments including retirement savings, indemnity, and insurance. Indian residency programs need to include formal financial training in its curriculum. Addressing this lack of financial literacy can help the doctors greatly in making informed decisions about their investments, improving the eventual quality of life, and to a certain extent, the global economic status of the country.

References

- Huston SJ. Measuring financial literacy. *J Consum Aff* 2010;44:219-316.
- Varthana. What do you Mean by Student Loan Forgiveness and how it Works? 2023 Available from: <https://varthana.com/student/what-do-you-mean-by-student-loan-forgiveness-and-how-it-works> [Last accessed on 2023 Jun 07].
- Kumar R. The leadership crisis of medical profession in India: Ongoing impact on the health system. *J Family Med Prim Care* 2015;4:159-61.
- Ahmad FA, White AJ, Hiller KM, Amini R, Jeffe DB. An assessment of residents' and fellows' personal finance literacy: An unmet medical education need. *Int J Med Educ* 2017;8:192-204.
- Wong R, Ng P, Bonino J, Gonzaga AM, Mieczkowski AE. Financial attitudes and behaviors of internal medicine and internal medicine-pediatrics residents. *J Grad Med Educ* 2018;10:639-45.
- Bhatia S, Singh S. Exploring financial well-being of working professionals in the Indian context. *J Financ Serv Mark* 2023;1-14. DOI:10.1057/s41264-023-00248-2.
- Agarwal N, Biswas B. Financial literacy and its correlates among healthcare professionals of India: An ignored educational need. *J Educ Health Promot* 2022;11:246.
- Jain G, Agrawal V, Sharma D, Agarwal P, Yadav SK, Gupta V. Personal financial literacy among Indian postgraduate residents. *Natl Med J India* 2022;35:105-7.
- Cone RJ, Cone BM, Paul KD, Arguello AM, McCalman DM, McGwin G, et al. Financial literacy in orthopaedic surgery residents: A cohort survey. *J Am Acad Orthop Surg Glob Res Rev* 2022;6:e21.00276.
- Sharma R. Kuppuswamy's socioeconomic status scale--revision for 2011 and formula for real-time updating. *Indian J Pediatr* 2012;79:961-2. Erratum in: *Indian J Pediatr* 2012;79:1108.
- Sharma R, Saini NK. A critical appraisal of Kuppuswamy's socioeconomic status scale in the present scenario. *J Family Med Prim Care* 2014;3:3-4.
- Austrian K, Anderson A. Barriers and facilitators to health behaviour change and economic activity among slum-dwelling adolescent girls and young women in Nairobi, Kenya: The role of social, health and economic assets. *Sex Educ* 2015;15:64-77.
- Johnson E, Sherraden MS. From financial literacy to financial capability among youth. *J Sociol Soc Welf* 2007;34:119-45.
- Jennings JD, Quinn C, Ly JA, Rehman S. Orthopaedic surgery resident financial literacy: An assessment of knowledge in debt, investment, and retirement savings. *Am Surg* 2019;85:353-8.
- Youngclaus J, Fresne A, Bunton A. An Updated Look at Attendance Cost and Medical Student Debt at US Medical Schools: Analysis in Brief. Washington, DC, AAMC; 2017. p. 17.
- Bono MJ, Wermuth HR, Hipskind JE. Medical malpractice. In: *StatPearls. Treasure Island, FL: StatPearls Publishing; 2023 Available from: https://www.ncbi.nlm.nih.gov/books/NBK470573* [Last accessed on 2022 Oct 31].

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