Original Research Article

Financial knowledge, attitude and investment practices among Indian doctors

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INTRODUCTION

Financial knowledge is defined as the understanding of financial concepts and procedures as well as the use of this understanding to solve financial problems.¹ Having financial knowledge is a prerequisite for making sound financial decisions.² Going by the aforementioned logic, people should be able to make more effective borrowing decisions if they have a sound understanding of the functioning of financial markets.³ The financial attitude...
of a person can be defined as a personal inclination towards financial matters. Several studies suggest that negative financial attitudes weaken the financial decision-making power of people. Tolerability of financial risk is a key element of financial attitude. Financial risk is subjective since it refers to the perception of a person about a financial practice, which is in turn influenced by past experience, belief and attitude towards that particular practice. The term financial practices refers to the set of common methods or standard operating procedures you develop for carrying out accounting, financial reporting, budgeting and other activities related to business finances. Positive financial practices are the backbone of a secure financial environment. For instance, having medical insurance is a part of positive financial practices, the absence of which leads to high medical expenditure which is responsible for bankruptcy. Professional financial advice may lead to good practices; many investors are only as aware of investment as patients are about treatment. Thus just as we have doctors to provide guidance to patients about treatment and are trusted by patients, financial advisors should be entrusted with the responsibility of guiding investors about investment.

For doctors, in particular, subjects like banking, investment and equities bear no relation to medical subjects. One may then tend to believe that they require adequate professional help with subjects such as but not limited to those mentioned above. Most doctors begin their careers without proper knowledge of finance. This leads to inefficient financial decisions, avoidable losses and agony. Doctors start earning enough to sustain a household, later in life as compared to their counterparts from other professions. Therefore, it is extremely vital for doctors to have sound financial knowledge, attitude and practices right from the time they start earning well to avoid financial problems. People who had severe financial problems were frequently unprepared for financial emergencies such as illness or death. Thus, doctors should practice good financial practices apart from their routine medical practice.

This study aimed to evaluate the financial knowledge, attitudes and practices of Indian doctors according to their age, sex and nature of employment apart from establishing a relationship between financial knowledge, attitudes and financial practices.

METHODS

Study design and study period

This was an online questionnaire based mixed type of cross-sectional study conducted on 286 doctors (N=286) from urban and rural parts of various states of India to evaluate their financial knowledge, financial practices as well as attitude towards financial management and investments. The study was done between the 25 April 2021 to the 27 May 2021 wherein data collection was done till the 15 May 2021 and then the analysis of data and the writing of the research article was done thereafter.

Study population and sample size

The study population consisted of registered Indian medical practitioners above the age of 20 years, who had completed their undergraduate degree in the medical stream and were either consultants or academicians or both, in any stream of medicine. The study population was a mix of urban and rural practitioners across various states of India. Based on a previous study by global financial literacy excellence center that stated the financial literacy among Indians was 24%, the sample size for our study was calculated as 281. However, our final sample size was 286 (N=286). Out of the 286 study participants, 179 were males and 106 were females and 1 person preferred not to disclose their gender. Out of the 286 respondents, 153 respondents did not reveal their nature of employment. Therefore the sample size for the questions based on the nature of employment was 133.

Exclusion criteria

The undergraduate medical students and interns who had just completed their undergraduate medical studies and were doing internships in hospitals were excluded from the study as they did not fit the criteria of earning enough to support a household.

Ethical consideration

Ethical clearance was obtained from the institutional ethics committee. The research proposal was drafted by the authors for the main study to the ethics committee. Finally, online informed consent was obtained from each of the participants and they were assured of complete confidentiality, anonymity and privacy.

Study tool

The questionnaire served the purpose of gaining an understanding of the financial knowledge, financial practices and attitude towards financial management and investments. The questions tested the knowledge, opinions and behaviors related to financial management. They were multiple choice questions having single and/or multiple correct responses. The scales used were the Likert scale as well as the nominal scale. The questions testing the knowledge of respondents were framed using authentic information obtained from reputed banks as reference. The data was collected between 25 April 2021 and 10 May 2021, by a pre-validated online questionnaire. The participation was anonymous and completely voluntary and the participants were not obligated to complete the questionnaire. The participants were not required to disclose any personal information apart from age and sex. The financial knowledge score was calculated using 4 questions, 25 points being allotted to each correct answer and 0 to wrong options. The
attitude was assessed using response to 4 questions on investment on a Likert scale of 0 to 5 points with 5 representing the highest perception of risk/benefit to each type of investment. The financial practice was determined using response to their preferred investment option.

**Statistical analysis**

Primary data was collected in paper-based proforma and the data was then entered in Microsoft excel spreadsheets 2013. Statistical analysis was done using SPSS version 20.0. Continuous variables were described as mean±standard deviation or median with interquartile range. Due to high skewness in the data, non-parametric tests were used. Kruskal-Wallis test was used to compare mean ranks. Among the non-parametric tests, proportions of test variables above and below medians values were compared using the Chi-square test. Categorical variables were taken in the form of frequencies and proportions and cross-tabulations were done for the chosen parameters. Column proportions were compared using the Chi-square test. Binary correlations for the variables were performed using Pearson’s correlation coefficient. P<0.05 was considered significant.

**RESULTS**

The demographic characteristics of the study population are illustrated in Table 1. Out of the total sample size (N=286), 62.8% were males, 37.2% were females and 0.003% preferred not to disclose their gender. The mean age of the study population was 46.2±13.4 years (mean age±SD). The study of the current investments of the study population revealed that most of them invested in savings account (60%) followed by medical insurance (59.3%), fixed deposits (59.3%), other investments like gold, land, or shares (56.5%), mutual funds (49.5%), term insurance (41.8%) and recurring deposits (24.6%) in that order. 32.3% of the study population preferred investment options that had fluctuating returns but inflation-beating returns while 14% preferred options with poor but fixed returns. However, most of them (53.7%) preferred investment options that were intermediate to the aforementioned ones. Our study also revealed that 36.5% of the doctors were already seeking help to manage their finances while 34.7% expressed the need of seeking professional help as compared to 28.8% of doctors who wished to manage their finances on their own.

**Table 1: Demographic characteristics of study population.**

| Characteristics            | Number | Percentage |
|----------------------------|--------|------------|
| Gender                     |        |            |
| Female                     | 106    | 37.2       |
| Male                       | 179    | 62.8       |
| Prefer not to say          | 01     | 0.003      |
| Age groups (in years)      |        |            |
| 20-30                      | 30     | 10.5       |
| 31-40                      | 63     | 22.1       |
| 41-50                      | 124    | 43.5       |
| 51-60                      | 49     | 17.2       |
| 61-70                      | 13     | 4.6        |
| >70                        | 06     | 2.1        |
| Mean age±SD=46.2±13.4      |        |            |
| Current investments        |        |            |
| Fixed deposits (FDs)       | 169    | 59.3       |
| Mutual funds               | 141    | 49.5       |
| Term insurance             | 119    | 41.8       |
| Recurring deposits         | 70     | 24.6       |
| Savings account            | 171    | 60.0       |
| Medical insurance          | 169    | 59.3       |
| Others (gold, land or shares) | 161 | 56.5 |
| Investment preference      |        |            |
| Ones with fluctuating returns but inflation-beating returns | 92 | 32.3 |
| Ones with poor but fixed returns | 40 | 14.0 |
| A little of both           | 153    | 53.7       |
| Need of professionals help |        |            |
| Already seeking help       | 104    | 36.5       |
| Expressed need of professional help | 99 | 34.7 |
| Wish to manage on own      | 82     | 28.8       |
Table 2: Comparison of financial knowledge score among various subgroups.

| Grouping variables | No. | Mean financial knowledge score | Std. deviation | Mean rank | P value |
|--------------------|-----|--------------------------------|----------------|-----------|---------|
| Gender             |     |                                |                |           |         |
| Female             | 106 | 27.4                           | 22.0           | 127.9     | p=0.011 |
| Male               | 179 | 34.2                           | 19.8           | 152.0     |         |
| Age (in years)     |     |                                |                |           |         |
| 21-30              | 30  | 13.3                           | 20.5           | 75.4      | p<0.0001|
| 31-40              | 63  | 30.2                           | 20.7           | 137.3     |         |
| 41-50              | 124 | 33.7                           | 19.4           | 150.1     |         |
| >50                | 68  | 37.5                           | 19.6           | 165.1     |         |
| Nature of employment |   |                                |                |           |         |
| Consultant at private hospital | 31 | 41.9                           | 19.8           | 78.7      | p=0.138 |
| Employed at a private hospital | 28 | 30.4                           | 25.8           | 61.7      |         |
| Lecturer at medical college | 15 | 38.3                           | 20.8           | 73.7      |         |
| Owner of hospital or clinic | 59 | 31.4                           | 23.5           | 61.7      |         |

Table 3: Comparison of risk-averse versus risk-bearing attitude towards investments among various subgroups.

| Variables                  | No. | Risk-averse attitude (number of respondents>median score) | Risk bearing attitude (number of respondents≤median score) | P value |
|----------------------------|-----|----------------------------------------------------------|-----------------------------------------------------------|---------|
| Gender                     |     |                                                          |                                                           |         |
| Female                     | 106 | 59                                                       | 47                                                        | p=0.129 |
| Male                       | 179 | 83                                                       | 96                                                        |         |
| Age (in years)             |     |                                                          |                                                           |         |
| 21-30                      | 30  | 15                                                       | 15                                                        | p=0.945 |
| 31-40                      | 63  | 31                                                       | 32                                                        |         |
| 41-50                      | 124 | 64                                                       | 60                                                        |         |
| >50                        | 68  | 32                                                       | 36                                                        |         |
| Nature of employment       |     |                                                          |                                                           |         |
| Consultant at private hospital | 31 | 11                                                       | 20                                                        | p=0.009 |
| Employed at a private hospital | 28 | 19                                                       | 09                                                        |         |
| Lecturer at medical college | 15 | 06                                                       | 09                                                        |         |
| Owner of hospital or clinic | 59 | 18                                                       | 41                                                        |         |

Table 4: Correlations among financial knowledge, pessimistic attitude, investment practice and age.

| Parameters                  | Pessimistic attitude | Financial knowledge score | Age | Investment practice |
|-----------------------------|----------------------|---------------------------|-----|---------------------|
| Pearson correlation         | 1                    | -0.066                    | -0.043 | -0.037             |
| P                           | 0.266                | 0.467                     | 0.532 |
| Financial knowledge score   | -0.066               | 1                         | 0.292** | 0.149*             |
| Pearson correlation         | 0.266                | 0.0001                    | 0.012 |
| Age                         | -0.043               | 0.292**                   | 1    | 0.099              |
| Pearson correlation         | 0.467                | 0.0001                    | 0.094 |
| Investment practice         | -0.037               | 0.149*                    | 0.099 | 1                  |
| Pearson correlation         | 0.532                | 0.012                     | 0.094 |

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).
Table 5: Distribution of investment practices based on nature of employment.

| Nature of employment | Parameters | Investment practice | P value |
|----------------------|------------|---------------------|---------|
| Consultant at Private Hospital | No. | 6 | 14 | 11 | p=0.758 |
| | % | 37.5 | 21.2 | 21.6 | |
| Employed at a private hospital | No. | 4 | 14 | 10 | |
| | % | 25.0 | 21.2 | 19.6 | |
| Lecturer at Medical college | No. | 1 | 9 | 5 | |
| | % | 6.3 | 13.6 | 9.8 | |
| Owner of Hospital or Clinic | No. | 5 | 29 | 25 | |
| | % | 31.3 | 43.9 | 49.0 | |
| Total | No. | 16 | 66 | 51 | |
| | % | 100.0 | 100.0 | 100.0 | |

Table 2 illustrates the correlation of financial knowledge with gender, age and nature of employment among Indian doctors. It is seen that the financial knowledge of male doctors is significantly higher than that of female doctors (p=0.011). An increase in financial knowledge is seen with increasing age (p<0.0001) with the highest level of financial knowledge seen in respondents of the age 50 years and above. A statistically non-significant association (p=0.138) is seen between financial knowledge and the nature of employment, that is, among consultants, lecturers, those employed at private hospitals and owners of hospitals and clinics (entrepreneurs). Thus, even as age and gender are seen to influence financial knowledge, there is no evidence of the nature of employment influencing financial knowledge.

Table 3 shows the comparison of risk-averse versus risk-bearing attitudes towards investments among various subgroups pertaining to gender, age and nature of employment. It is seen that age and gender do not have a significant impact on the financial attitudes of Indian doctors towards investment. Females doctors are seen to have a more risk-averse attitude than their male counterparts but the difference is not significant (p=0.129). Statistically significant influence of nature of employment over the financial attitude of Indian doctors towards investment is observed (p=0.009). It is observed that the owners of hospitals and clinics, as well as consultants, have a greater risk-bearing attitude towards investments as compared to those employed at a private hospital and those who are lecturers at medical colleges.

It is seen from Table 4 that a highly significant (p=0.0001) and strong association is seen between higher financial knowledge and increasing age while a statistically insignificant inverse association is seen between financial knowledge and pessimistic attitude (p=0.266). A positive, strong association is also seen between financial knowledge and investment/financial practices which is statistically significant (p=0.012). Both advancing age and investment practices are inversely associated with pessimistic attitudes but the association is statistically insignificant (p=0.467 and p=0.532 respectively).

Table 5 illustrates the distribution of investment practices based on the nature of employment of Indian doctors. Owners of hospitals and clinics (entrepreneurs) have somewhat high risk and high reward financial practices as compared to consultants, those employed at private hospitals as well as lecturers at medical colleges. However, the difference is not statistically significant (p=0.758).

DISCUSSION

Prior research suggested that financial knowledge and financial attitude were two factors that influenced financial management practices in general. Some studies, however, failed to show a clear association between personal financial awareness and actual financial behavior. For example, it was found that only 34.6 percent of medical practitioners in Malaysia practiced positive financial management, despite the fact that 76.4 percent of medical practitioners in Malaysia had a positive attitude towards personal financial management. It was also found that there existed a weak correlation between financial knowledge and financial attitude. There was a need for a clear relationship between financial knowledge, financial attitudes and financial practices, so far lacking in the literature.

Previous research provided evidence about sex-based variability of financial knowledge. For example, it was
reported that male money managers had better insurance knowledge than female money managers. However, a number of questions regarding whether the same applied to other areas of finance or whether male doctors had better insurance knowledge than female doctors, remained to be addressed. Age and sex did not correlate with financial attitude according to a previous study. On the contrary, there were other studies that proved that age was linked to financial management behavior. For instance, it was reported that the patterns of dealing with financial matters varied greatly across age groups. To fill this literature gap, it was important to study the correlation of age with financial attitudes and practices among doctors. Financial satisfaction, gained by achieving a specific financial goal was found to be linked to financial risk tolerance. Preference of the methods of investment of an individual resulted from a desire to achieve a specific financial goal and thus financial satisfaction.

From the results of this study, it was found that the preferred investment option for Indian doctors was a savings account followed closely by medical insurance and other (gold, shares, or land). Thus we can say that the attitude of Indian doctors towards finances was such that they looked for secure options or options that can avail them long term security in terms of finances. Though most of them were already seeking help, a similar proportion acknowledged the need for having professional help to manage their finances. This finding showed that fewer Indian doctors actually had the desire or were confident enough to manage their finances. The results of the study had shown that financial knowledge had a positive association with age which was statistically significant. This fact was also corroborated by the findings of previous studies which showed that financial knowledge improved with time and age. The increase in financial knowledge may be attributed to the experience in this matter of Indian doctors that increased with age. Indian doctors gained valuable experience over time as they continuously manage finances. From this finding, we can conclude that doctors of the same age have a similar level of financial knowledge irrespective of the nature of their employment.

It was also seen that female doctors have a lower level of financial knowledge than their male counterparts. Previous studies have also reported similar findings in terms of gender-based variability of financial knowledge. The gender-based variability in financial knowledge arose from the difference in the socioeconomic status (earnings, education and employment levels) of males and females. As we had observed in the results, we can see that the attitude of Indian doctors towards finances did not differ with age and gender significantly but it did show significant variation with the nature of variation of doctors. This finding was in harmony with a previous study which also highlighted that there was no gender-based difference in the attitudes of Indian doctors towards finance. However, another study stated that as age advances, the risk-taking attitude of people in terms of finances decreased. This was in complete contrast to our findings and the difference may have resulted from different demographics (for example different study participants) of the studies. Thus, we can conclusively say that financial knowledge depends on the age and gender of Indian doctors but financial attitude depended only on the nature of employment of Indian doctors. Owners of hospitals/clinics (entrepreneurs) and consultants having a more risk-bearing attitude as compared to lecturers at medical colleges and those employed at private hospitals can be explained by the fact that owners of hospitals/clinics (entrepreneurs) and consultants have an entrepreneur-like mindset that was more open to taking financial risks.

Our study also highlighted the fact that there was no significant association between financial/investment practices and the age of Indian doctors. Thus it can be inferred that financial practices remain relatively constant for Indian doctors over time. A previous study, however, had mentioned that financial decisions and practices become better with age. Again the difference in findings could be attributed to differences in the study population and demographics of the study population. Finally, from our findings, we saw that financial/investment practices did not vary significantly with the nature of employment of Indian doctors. It was noted that owners of hospitals/clinics (entrepreneurs) have high risk, reward financial practices as compared to consultants, those employed at private hospitals and lecturers at medical colleges. From the study, a peculiar trend is seen among consultants; although consultants have a risk-bearing financial attitude towards investments it did not reflect on their financial practices as they looked for options that were secure in terms of financial practices. Financial knowledge had a strong, statistically significant association with financial practices. Thus a high level of financial knowledge significantly impacted the financial practices of Indian doctors. However financial attitude and financial practices had no such significant association. Thus we cannot say that a positive financial attitude or optimistic financial attitude will result in better financial/investment practices or vice versa.

**CONCLUSION**

The level of financial knowledge among Indian doctors, especially younger doctors, is unsatisfactory and most of the doctors acknowledge the fact they are not able to manage their finances efficiently by themselves either due to a lack of desire to do so or lack of confidence resulting from inadequate financial knowledge. This calls for a need to create an optimal level of financial awareness among doctors as well as a positive change in their financial attitude. Increasing their financial knowledge initially may have a positive implication on their financial practices later on. Financial awareness programs can be conducted to deliver financial education to young doctors.
In particular, who are just setting their foot into the world of medical practice. Such programs need not be limited to young doctors but must, in fact, include doctors at all stages of their medical career and working at various levels. Finally, if possible, financial education must be delivered to doctors at the undergraduate level itself so that there is no dearth of financial knowledge among these doctors when they start their medical careers.

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