

# Financial Literacy Among Postgraduate Residents of Government Medical College in A District of Western Maharashtra

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## Abstract

**Background:** Financial literacy is the ability of managing financial matters. It involves application of various financial skills like budgeting and investing etc. The doctors throughout the medical education have to focus on acquiring medical knowledge & skills. The vulnerability to financial problems remains largely due to lack of proper knowledge of finance. So, the present study to assess the financial literacy among postgraduate residents is undertaken.

**Materials and Methods:** It was an observational descriptive study. We included all 212 postgraduate residents of government medical college, out of which 180 postgraduate residents participated in the study. Questionnaire based on the OECD financial literacy survey was used as study tool.

**Results:** Among the study participants, 40% were found to be financially literate. 46.7% percent of the participants were literate by financial knowledge .88.33% of the participants were literate by financial behaviour .70% of the participants were literate by financial attitude. Financial literacy was significantly associated with age, gender. It was significantly more in in-service postgraduate residents (p value<0.05). Financial literacy was highly significant in postgraduates working in pre-para clinical departments (p value<0.01). No significant association was found between financial literacy and marital status.

**Conclusion:** The postgraduate residents have shown significant deficits in overall financial literacy as well as in financial knowledge, investment practices. Financial training workshop sessions should be conducted during residency period. Future studies to evaluate the changes in knowledge and behaviour before, during and after the training is the need of hour.

**Keywords:** Financial literacy, Financial knowledge, Financial behaviour, Budgeting, Investment practices

## Introduction

Financial literacy is defined as "A combination of awareness knowledge, skill attitude and

behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing."<sup>[1,2,3]</sup> Financial literacy has three aspects

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namely financial knowledge, attitude and behaviour. [3,4] Financial Knowledge involves understanding of key financial concepts and ability to evaluate benefit in real life financial situations. [2] Financial knowledge is a prerequisite for making sound financial decisions. [5] Financial Behaviour involves study of day-to-day money management, financial planning, savings, spending, bill payments, gathering information before purchase of financial products, reliance on credit. [2] Financial attitude aims at prioritization of short-term wants over long-term security, personal inclination towards financial matters. [5] Several studies suggest that the negative financial attitude weaken the financial decision making. [5,6,7]

Financially literate individuals can take informed decision contributing to long-term financial stability and security. The doctors are vulnerable to financial problems because of their unsatisfactory levels of financial knowledge and lack of awareness in terms of investments. [5] This leads to inefficient financial decisions, avoidable losses and agony. [8] The academic and work performance is negatively impacted by financial stress. The financial health of residents correlates with their mental health, resilience and academic or clinical performance. [9] The study done by Ross et al in undergraduate medical students had found that 66.2% of the students reporting money as source of stress and 78.1% students reporting coursework as source of stress. [10] Thus, money came in as second most common cause of stress after coursework. [10,11]

Most doctors begin their careers without proper financial knowledge. [5] The residents are overworked and having no scope for getting financial knowledge in traditional education system. That leaves the vacuum presently for acquiring the financial skills. The cost of medical education is rising with the looming of private medical institutions and so is the uptrend of educational debt. Prior studies have indicated a correlation between financial stress and burnout among medical professionals. This underscores the need for postgraduate residents to have the financial skills.

The Prevailing literature suggests that only about 25% to 60% of the Healthcare professionals are financially literate [12]. The study done by Cawyer CR et al. involving obstetrician/gynaecologist

residents demonstrated that participants who completed a financial literacy curriculum reported significant improvements in their sense of well-being, as measured by the Expanded Well-Being Index (E-WBI). [13] Many studies in North America have addressed the issue of financial literacy among residents. [9] In India, there are a very few studies done to assess the financial literacy among postgraduate residents.

The present study was designed to evaluate financial literacy among postgraduate residents and to determine association between demographic factors, background characteristics and financial literacy.

## Methodology

### Study design and setting

It was an observational descriptive study. It was conducted at a Government Medical College in Solapur district of Western Maharashtra, in month of August 2023.

### Study Participants and Sample size

The postgraduate residents from Government Medical College in Solapur district of western Maharashtra were the study participants. The medical college consisted of total 212 postgraduate residents.

**Inclusion Criteria:** All postgraduate residents of the medical college willing to give consent to participate in the study were included in the study.

**Exclusion Criteria:** Those postgraduate residents, not willing to give consent to participate in this study were excluded from the study.

### Study tool and technique

The semi-structured questionnaire based on Organization for Economic Cooperation and Development financial literacy questionnaire was developed as study tool. [1,2] The OECD is an international organisation promoting policies aimed at sustainable economic growth. India as a key partner participates in policy discussions in OECD bodies. It was pretested in pilot study. The study tool composed of demographic characteristics (age, gender, marital status), background characteristics such as quota of admission of postgraduates (in- service / regular

quota), working as postgraduate resident in pre-para clinical or clinical department, questions on financial knowledge, financial behaviour and financial attitude.

**Financial knowledge score:** It consisted of 8 questions on division, time value of money, interest on loan, simple interest, compound interest, inflation, risk-return relationship and diversification. (Minimum score 0 and maximum score 1.) The score for qualifying as 'literate by financial knowledge' is  $\geq 6$  out of 8.

**Financial behaviour score:** It consisted of 14 questions on household budget, ability towards meeting monthly expenses, evaluation of options prior to selection of financial products/ services, gathering information before purchase of financial products/ services, saving money, bill payments, affordability, personal financial affairs and setting long term goal. The score was calculated after merging information of the results of related questions. The score for qualifying as literate by 'financial behaviour' is  $\geq 6$  out of 9.

**Financial attitude score:** It consisted of 3 questions on attitude towards spending money, saving money and planning money. Total Score is obtained by adding together the scores for each of the three questions and then dividing by 3. (Minimum score 1 and maximum score being 5). The Score for qualifying as literate by 'financial attitude' is  $\geq 3$  out of 5.

**Financial literacy score:** The score for qualifying as a financial literate is if the combined score of at least 15 out of 22 with minimum of 6 in financial knowledge, 6 in financial behaviour and 3 in financial attitude.<sup>[2]</sup>

**Statistical analysis:** The data was analysed in Microsoft Excel. The mean and standard deviation of scores of financial knowledge, financial behaviour and financial attitude were calculated. The variables of demographic factors and background characteristics as well as variables in different domains of financial literacy were mentioned in percentages. The

chi-square test was used to determine the association.

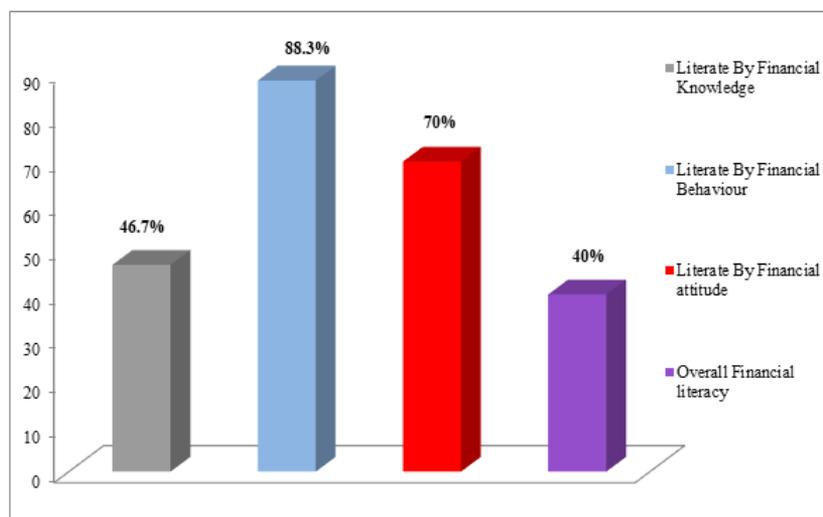
**Ethical Considerations:** The Institutional Ethical Committee approval was taken with reference No. IEC/VMGMC/SCSMGH, Solapur 165/03-06-2023. Informed written consent of each of the study participant was taken before the questionnaire administration. The anonymity and confidentiality of the data was maintained.

## Results

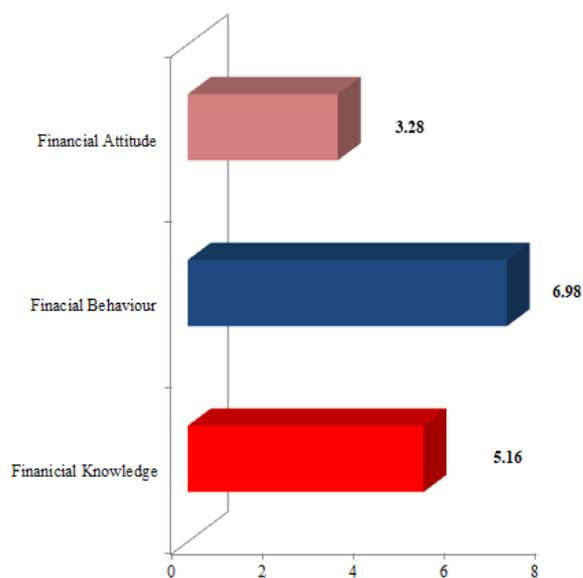
**Table No. 1 Demographic and Background profile of study participants (n=180)**

| Variables                 | Number (n) | Percentage (n%) |
|---------------------------|------------|-----------------|
| <b>1. Age</b>             |            |                 |
| <30                       | 117        | 65%             |
| $\geq 30$                 | 63         | 35%             |
| <b>2. Gender</b>          |            |                 |
| Male                      | 84         | 46.7%           |
| Female                    | 96         | 53.3%           |
| <b>3. Marital status</b>  |            |                 |
| Married                   | 69         | 38.33%          |
| Unmarried                 | 111        | 61.67%          |
| <b>4. Admission Quota</b> |            |                 |
| In Service                | 12         | 6.67%           |
| Regular                   | 168        | 93.33%          |
| <b>5. Department</b>      |            |                 |
| Clinical                  | 135        | 75%             |
| Pre-Para clinical         | 45         | 25%             |

A total of 180 postgraduate residents finally participated in the study. 53.3% were female and 46.7% were male participants, 65% of the participants belonged to less than 30 years of age group and 35% belonged to greater than or equal to 30 years of age group, 61.67% of participants were unmarried and 38.33% participants were married. Among background characteristics, 6.67% of the study participants were in-service postgraduate residents and 93.33% postgraduate residents were admitted in regular admission quota.



**Figure No. 1 Showing Financial Literacy among study subjects**



**Figure No. 2 Showing mean score of Financial Attitude, behaviour & Knowledge**

Among the study participants, 40% were found to be financially literate. 46.7% percent of the participants were literate by financial knowledge. 88.33% of the participants were literate by financial behaviour. 70% of the participants were literate by financial attitude. Mean financial attitude score was  $3.28 \pm 0.89$ , Mean financial behaviour score was  $6.98 \pm 1.26$  and mean financial knowledge score was  $5.16 \pm 1.53$ .

Considering various domains of financial literacy only 31.7% had investments, 41.7% had savings, 53.3% participants do make monthly budget, and 100% participants responded positively on paying bills in time, only 23.3% participants responded positively to the ability of meeting living cost without borrowing. 90% participants responded positively to set long term financial goals and strive to achieve them.

61.7% participants had knowledge about simple interest. Only 10% of participants had knowledge about compound interest. 53.3% had knowledge about diversification and 53.3% had knowledge about inflation. 40% participants have shown positive financial attitude towards spending money. 53.35% have shown positive financial attitude towards saving money. 37% have shown positive attitude towards planning money.

Financial literacy was significantly associated with age and gender. It was also found that the financial literacy was significantly more in in-service postgraduates, than those who were not from in-service (i.e. regular) ( $p < 0.05$ ). Financial literacy was also significantly more in the post graduate residents working in pre-para clinical departments than those in clinical departments. ( $p < 0.01$ ). No significant association was found between financial literacy and marital status.

**Table No. 2 Association of demographic and background characteristics with financial literacy of study participants(n=180)**

| Particulars                  | Financial Literate (n%) | Not literate (n%) | Chi square Statistics    |
|------------------------------|-------------------------|-------------------|--------------------------|
| <b>1. Age (Years)</b>        |                         |                   |                          |
| <30                          | 39 (33.33%)             | 78 (66.67%)       | $\chi^2= 6.19$<br>p<0.05 |
| ≥ 30                         | 33 (52.30%)             | 30 (47.62%)       |                          |
| <b>2. Gender</b>             |                         |                   |                          |
| Male                         | 41 (48.81%)             | 43 (51.19%)       | $\chi^2=5.09$<br>p<0.05  |
| Female                       | 31 (32.29%)             | 65 (67.71%)       |                          |
| <b>3. Marital status</b>     |                         |                   |                          |
| Married                      | 27 (39.13%)             | 42(60.86%)        | $\chi^2=0.03$<br>p>0.05  |
| Unmarried                    | 45 (40.54%)             | 66 (59.46%)       |                          |
| <b>4. PG Admission Quota</b> |                         |                   |                          |
| In service                   | 9 (75%)                 | 3 (25 %)          | $\chi^2=6.56$<br>p<0.05  |
| Regular                      | 63 (37.5%)              | 105 (62.5%)       |                          |
| <b>5. Department</b>         |                         |                   |                          |
| Clinical                     | 42 (31.11%)             | 93 (68.89%)       | $\chi^2=17.78$<br>p<0.01 |
| Pre-Paraclinical             | 30 (66.7%)              | 15 (33.33%)       |                          |

## Discussion

Financial literacy is recognized as important, but remains an overlooked area<sup>[14]</sup>. This study evaluates the financial literacy among postgraduate residents.

We, in the present study, found 40% of the participants to be overall financially literate. The study done by Neeraj Agarwal et al.<sup>[12]</sup> among health care professionals (HCPs) had found 68.3% to be financially literate. The financial literacy in present study was more when compared with the findings of study done by Mulligan et al.<sup>[15]</sup> (25%). But it was less when compared to the studies done by Altan et.al<sup>[16]</sup> (60%) and Ahmed et al.<sup>[17]</sup> (52%) and This may be due to different financial literacy assessment tools and due to difference in social, cultural and economic differences of sample population.

In our study we had found 46.7% percent of the participants were literate by financial knowledge. 88.33% of the participants were literate by financial behaviour. 70% of the participants were literate by financial attitude. NCFE-FLIS 2019<sup>[2]</sup> conducted among respondents in age group of 18 to 80 years, have reported 49% respondents to be literate by financial knowledge which was similar to our study findings. NCFE-FLIS 2019<sup>[2]</sup> have reported 53% respondents to be literate by financial behaviour and 89% to be literate by financial attitude.

The financial literacy was more in males (48.1%) compared to female participants (32.9%). The similar findings have been reported in study done among HCPs by Neeraj Agarwalet al.<sup>[12]</sup>, also in a study done by Jaykumar et al.<sup>[18]</sup> In the study done by Anness S. Tambolkaret al.<sup>[5]</sup>, it was found that financial knowledge of male doctors is significantly higher than that of female doctors.

Prior studies suggested age, sex, marital status, ethnicity, educational level, cadre title, income, financial attitude, and so on, as significant determinants of one's financial literacy status.<sup>[12,19,20]</sup> In our study significant association was seen between financial literacy with age and gender. Study done by Jaykumar et al.<sup>[18]</sup> have also shown association between age and financial literacy and gender and financial literacy. The study done by Anness S. Tambolkar et al.<sup>[5]</sup>, have also shown increase in financial knowledge in seen with increasing age with the highest level of financial knowledge is seen in respondents of age 50 years and above.

This study has shown no significant association between financial literacy and marital status. This is similar with the findings of study done by Ryan J. Cone et al.<sup>[14]</sup> This is in contradiction with the study done among HCPs by Neeraj Agarwal et al.<sup>[12]</sup> This may be due to difference in work experience of HCPs and residents. The residents may delegate financial decision-making to their partners due to overwork

or it may be due to different socio-cultural patterns. Married residents might face financial stress related to familial responsibilities, coupled with long hours of work and irregular schedules. Some researchers have noted that those who are married are more financially literate although another researcher has found that the marital status does not matter and the result came to be almost the same and there is no significant gap at all.<sup>[21]</sup> The result is quite inconclusive as different researchers have different results.<sup>[21]</sup>

Moreover our study considered background characteristics such as quota of admission of postgraduates (In- service / regular quota), working as postgraduate resident in pre-para clinical or clinical department, for the first time in this study ever done in India. We found, financial literacy was significantly more in in-service postgraduates, than those who were not from in-service (i.e. regular). This may be due to in-service candidates might be acquiring financial skills during the service period as a part of administrative trainings and the administrative role in nature of such jobs. It also may be due to experience over time as they continuously manage the finances.

We also found that the financial literacy was significantly more in the post graduate residents working in pre-para clinical departments than those in clinical departments. This may be due to facts that postgraduates working in clinical departments are always burdened due to high working hours and irregular schedules. The study done by Neeraj Agarwal et al. <sup>[12]</sup> have mentioned the branch as significant influencers of financial literacy.

In our study, taking into account various domains of financial literacy, only 31.7% of participants had investments. only 10 % of them had correctly answered the question about compound interest as against 97.7% in the study done in US by Jaykumar et al. <sup>[11]</sup> This difference may be due to economic differences of sample population. It was interesting to note that only 23.3% had responded positively to the ability of meeting living cost without borrowing. This may be due to familial obligations, prior debts during under graduation, irregular disbursement of stipends. The findings highlight need for financial education training to increase the financial literacy as well as financial growth prospects of postgraduate residents.

## Conclusion

The postgraduate residents in the study have shown significant deficits in overall financial literacy as well as in financial knowledge, investment practices. This indicates the need for financial awareness among the postgraduate residents. Financial literacy has shown to be associated with age and gender, as well as the type of in-service or regular admission quota and the clinical or pre-paraclinical department of residency. These results underscore the importance of considering these variables while assessing financial literacy among medical professionals. The residents from Pre-Para clinical department have shown higher overall financial literacy than their clinical counterparts. This may be due to high working hours and so high burnout for the residents working in clinical departments.

Medical institutions often traditionally focus on clinical skills and knowledge. The financial acumen required for managing personal and professional finances gets neglected. There many studies recommending to include financial knowledge in the medical curriculum. To make postgraduate residents able to take financial decisions based on the facts, the integration of financial literacy into medical training is must. There should be a structured curriculum having modules on personal finance, finance planning, debt management, investment strategies. Focus should also be given on conducting regular workshops and seminars by financial experts for postgraduate residents.

To have adequate financial knowledge at start of career, financial training programs can be thought out to begin at undergraduate level itself. Mentorship programmes connecting postgraduate residents with financially savvy professionals is also a need. This holistic approach to medical education can help to curate the long term well- being of residents. "National Medical Commission (NMC) in its "Post-Graduate Medical Education Regulations, 2023" have mentioned that Institutions may arrange training in any other courses like finance and accounts etc., which are beneficial to the post-graduate students.<sup>[22]</sup> Future studies to evaluate the changes in financial knowledge, behaviour, practices before, during and after training should be done.

Limitations: The present study was conducted in a Government Medical College. Multi- centric study all over the state or all over India needs to be done to assess the financial literacy among post graduate residents. It can also be further expanded to medical

officers, medical faculties working in medical education and as well as to the medical professionals.

**Ethical Clearance:** Institutional Ethics Committee Dr. V. M. Govt. Medical College and Shri. C. S. M. General Hospital, Solapur Approval No.165 /Date: 03-06-2023

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