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Financial Literacy Of Doctors – A PRISMA And PAGER Compliant Review

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Abstract:
Aim and Background*: The study's goal is to construct a map of the academic landscape of research into doctors' financial literacy by highlighting the most general patterns, advances, knowledge gaps, and empirical evidence. Indicators of professionalism include an understanding of finances, which can have an impact on the quality of treatment provided by doctors. Research on doctors' ability to manage money has been collected but has not yet been mapped.*
Methods: *Adhering to PRISMA-ScR and the PAGER Framework, a systematic search was conducted across databases like MEDLINE, SCOPUS, and Google Scholar using a comprehensive set of financial and medical keywords. Studies were screened and selected through a rigorous two-stage process based on the PCC framework with clearly defined inclusion and exclusion criteria, ensuring removal of duplicates. Extracted data on study design, sampling, analytical tools, and key financial concepts were systematically synthesized and mapped using the PAGER framework to highlight patterns, advances, and gaps in literature.*
Results: *A total of 22 studies were used in the analysis. The primary trends in the study have been the development and evaluation of the efficacy of educational programmes, as well as the investigation of the role of physicians in the context of financial management, including the obstacles they face and the ideal financial courses they perceive. The idea of 'financial literacy' was brought up in most of the research that was done.*
Conclusion: *There is a need to sponsor this research area, as evidenced by the scant study output across nations.*
Clinical significance: *Enhancing doctors' financial literacy can contribute to improved decision-making, reduced stress, and better focus on patient care. It supports overall professional well-being and ethical practice by minimizing financial mismanagement. Promoting financial education in medical training may indirectly enhance healthcare quality and system sustainability.*
Keywords: *Scoping review, financial literacy, financial courses, doctors, residents, financial attitudes.*

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I. Introduction

The importance of financial literacy among doctors extends deeply into healthcare management, strategic planning, and policy formulation. Financially literate physicians play a pivotal role in ensuring efficient allocation of resources, supporting hospital growth strategies, and influencing healthcare governance models. With a strong grasp of financial principles, doctors can analyze the cost implications of procedures, contribute to revenue diversification, evaluate the feasibility of new services like wellness programs or medical tourism, and negotiate competitive supply rates without compromising care quality. Their strategic input can also support long-term financial sustainability by engaging in planning, budgeting, and resource optimization.

At the policy level, financially savvy doctors can shape resource allocation strategies, contribute to the design of value-based care incentives, and actively participate in healthcare budgeting and governance discussions. Their input is vital for assessing the economic viability of health policies and influencing reforms at local and national levels. These skills enable them to align clinical excellence with institutional goals and financial sustainability[1,2]

Furthermore, doctors with financial knowledge can lead in curating innovative business models in healthcare. Their capabilities in market analysis, risk assessment, and cost-benefit evaluations allow them to develop scalable and evidence-based revenue models. They can also make sound investment decisions

regarding high-cost assets and advanced technologies by assessing return on investment (ROI), lifecycle costs, and integration challenges—balancing patient outcomes with financial responsibility[3]

Despite their responsibilities, most doctors complete medical education without any training in finance, resulting in poor money management, unnecessary stress, and susceptibility to financial misguidance[4,5] Early financial education is crucial, particularly due to doctors' delayed earnings and high debt. Custom financial education tailored to a doctor's career stage—from loan repayment to retirement planning—could address this gap effectively. Teaching basic financial concepts in medical curricula, such as budgeting, insurance, debt, and estate planning, would equip future doctors with essential life and career skills[6,7] .

The ACGME's six core competencies—Patient Care, Medical Knowledge, Practice-Based Learning, Interpersonal Skills, Professionalism, and Systems-Based Practice—currently exclude financial literacy[8,9] Integrating finance into these areas could enhance physicians' ability to understand healthcare economics, communicate treatment costs, and contribute to financially sound clinical decisions. In India, the MCI's competency-based curriculum similarly lacks financial education, despite its long-recognized importance[10]. Mapping the existing research on physicians' financial literacy can help identify knowledge gaps and inform future educational, regulatory, and policy efforts. Clinically, financial literacy empowers doctors to align cost-efficiency with care quality, fostering transparency, sustainability, and improved health outcomes.

II. Material AND Methods

Aim: The study's prime focus was to synthesize,

1. The characteristics of doctors' financial literacy are published to date.
2. The main outcomes investigated in recruited literature.
3. The advances produced in terms of knowledge and
4. The gaps are still present in this research field.

Design: A scoping review was performed following two guidelines, namely,

(1) The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR) guidance[11]

(2) PAGER Framework - (a) Patterns, (b) Advances, (c) Gaps and (d) Evidence for practice and research recommendations framework[12]

Search methods: Researchers used search engines like Google Scholar and EBSCO's SCOPUS as well as electronic databases including MEDLINE (PubMed), CINAHL-EBSCO, SCOPUS, and ProQuest's Health and Medical Complete. Initially, the database was searched using the Medical Subject Headings (MeSH) phrases (such as "financial Literacy"), and then other terms surfaced as being more frequent among doctors. (for instance, "financial literacy"). To extend the search, we used all MeSH/keyword combinations related to financial capabilities. The terms "financial literacy," "financial management," "financial liability," "financial knowledge," "financial capability," "financial behaviour," "financial education," "financial competency," "doctors," "surgeons," "clinicians," "physicians," "surgeons," "specialists," "residents," and "medical graduates" were all used by the researchers. In accordance with PCC – "Population, Concept and Context" framework[13], the following categories qualified for studies:

(1) population: Doctors' population (e.g., Doctors, clinicians, physicians, surgeons, specialists, residents, medical graduates) (Population),

(2) Concept: The search strategy included combinations of Medical Subject Headings (MeSH) and free-text keywords such as: "financial literacy," "financial management," "financial liability," "financial knowledge," "financial capability," "financial behavior," "financial education," "financial competency,"

(3) **Context**: All contexts were considered relevant, including hospitals, academic institutions, private practice settings, and medical universities. Only studies published in the English language were included.

Study selection process: The literature search covered studies published up to December 2022.

The results of the literature search were saved in a reference manager (Mendeley). The reference manager software and human review were able to identify and eliminate duplicate studies. Once the duplicates were eliminated, there were two phases of selection for the studies. Two reviewers first checked all possibly relevant papers' titles, abstracts, and keywords for inclusion. Two reviewers read the whole articles chosen in the previous stage. After reviewing reference lists, studies were added.

Inclusion Criteria: The studies qualified for inclusion based on the PCC ("Population, Concept, and Context") framework:

1. **Population:** Doctors' population (e.g., Doctors, clinicians, physicians, surgeons, specialists, residents, medical graduates).

2. **Concept:** Primary and secondary research on the concept of "financial competences" or comparable words (e.g., "literacy" or "knowledge").
3. **Context:** All contexts (e.g., "hospitals" and "universities").
4. **Language:** Published only in English.
5. **Additional:** Cited works of the initially included studies that met the above criteria were also considered.

Exclusion Criteria: The PRISMA framework diagram (Figure 1) in the document explicitly lists the exclusion criteria, which were applied during the screening and eligibility assessment phases:

Records Excluded during Screening (n=210):
- Not relevant with systematic review (n=186)
- Report on organizations (n=3)
- Other than English (n=3)
- Book chapter (n=3)
- Commentary (n=3)
- Concept based papers (n=4)
- Non-availability of abstract (n=3)

Reports Excluded during Eligibility Assessment (n=42):
- Not research-based (n=8)
- Focused on other health professions (n=10)
- Background/viewpoint (n=21)
- Course advertisement in universities (n=3)

The systematic approach to searching, screening, and selecting studies, providing transparency in the review process. The following components made up the final data extraction grid that was accepted by the whole research team and used to collect data from the qualifying studies: Include the following information in the reference list entry for this article and the authors extracted the details.
1. Author information about country of origin and year
2. Aims, study design and method of data collection.
3. Sampling frame, respondents' characteristics, and sampling method
4. Analytical tools
5. Terms and ideas used in the studies.
6. Interventions applied.

Data synthesis: First, a brief overview of the most important points from the papers that were considered has been provided. Then, the (PAGER) – "Patterns, Advances, Gaps, and Evidence" framework was utilized to explain the patterns of the present body of research in terms of (a) study features, (b) primary areas explored, (c) participant profiles, and (d) the fundamental financial concepts employed by authors (Bradbury and Jones)[12] . Thus, data collection in this sector revealed the greatest gains in evidence. We finished with open research issues and physician implications.

Prisma Framework

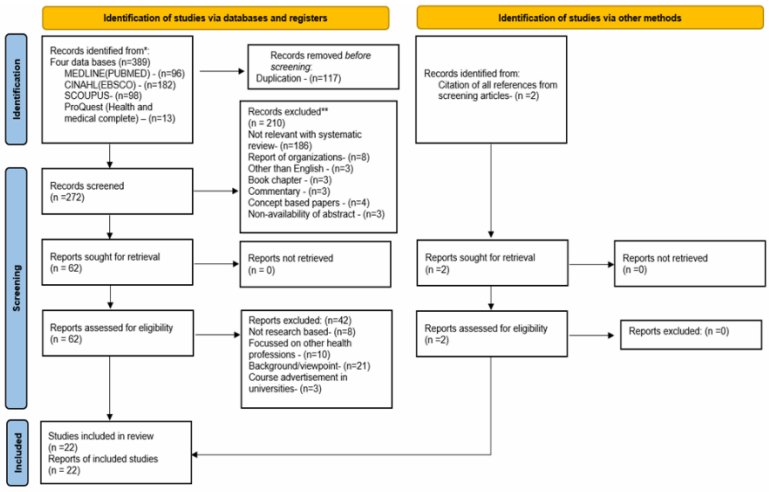

Figure 1: Prisma Framework – Extraction Of Studies

The figure 1 above representing the screening and inclusion of the studies considered for the review

III. Results

Table 1: Studies conducted in different contexts.

Authors	Context	Study conducted at
1. Cawyer-2022	Alabama	Medical institutions
2. Millen, Stacey et al. 2022	South Africa	Multi centers
3. Mizell -2019	United States	Medical institutions
4. Poon- 2022	Canada	Canadian medical schools
5. Neeraj Agarwal et al.2022	India	Selected state provinces
6. Jayakumar -2017	United States	US medical schools
7. Nowotny 2022et al.	United States	The single medical education system
8. Ahmad-2017	United States	University of Washington and Arizona Medical centers
9. Shappell et al.2018	United States	Not specified
10. John D Jennings-2019	United States	Multi centers from orthopedic residency
11. Cone et al. 2022a	United States	Collaborative Orthopedic Educational Research Group
12. Glaspy-2005	United States	AGGME Emergency residency program
13. Teichman et al. 2001	United States	20 urology training centers
14. Tambolkar et al.2021	India	Multiple state provinces -urban and rural
15. Payne-2020	United States	University of Nebraska medical center
16. Grewal, sweeney et al. 2021	United States	Florida State University College of Medicine
17. Anthony -2011	Malaysia	Multi centers
18. Anthony-2019	Malaysia	Multi centers
19. Garrett-2022	United States	Residency of community memorial health system
20. Adetayo-2019	United States	Single institution
21. Huebinger et al. 2021	United States	Multiple universities
22. Barrett et al.2022	United States	Not specified

The vast majority of U.S. academic and medical institution-based research, as seen in the table 1 above, (e.g., Alabama[14] Florida and Washington[15] South California[16] and Nebraska[17] North American researchers carried out one of the investigations (Canadian Medical schools)[18] There are two Indian studies[19,20] and two Malaysian studies[21,22] included as part of works from the Asian area. Only one research[23] was located, and it came from South Africa. Many of the studies were limited to using a representative sample of students from just one[24] or two institutions[25] of higher education (e.g., Studies were conducted in both Malaysia and India, looking at several states, provinces, and cities). Two of the studies did not provide any information on the research locations.[26,27]

Table 2: Participants' profile and sampling methods

Authors	Participants	Sampling methods	Sample size
Cawyer-2022	OB&G residents	Course attended residents	46
Millen, Stacey et al. 2022	Dentists and medical doctors	Voluntary online participation	473
Mizell-2019	4th year medical students	Random selection	411
Poon-2022	Medical students and residents	Voluntary participation	179
Neeraj Agarwal et al.2022	Doctors and interns	Voluntary participation	524
Jayakumar -2017	Medical students	Course attended students (1st and 4th year)	1390+1416
Nowotny 2022et al.	Medical students and residents	Not specified	261
Ahmad-2017	Medical school trainees	Voluntary participation	289+133
Shappell et al.2018	Residents	Not specified	12
John D Jennings-2019	Allopathic and orthopedic surgery residents	Anonymous online survey	85
Cone et al. 2022a	Orthopedic residents	Anonymous survey	1028
Glaspy-2005	Emergency medicine residents	Not specified	1128 male and 579 female
Teichman et al. 2001	Urology residents	Anonymous selection	151
Tambolkar et al.2021	Mix of urban rural practitioners	Random and voluntary participation	286
Payne-2020	FDC seminar attended students	All students	Not specified
Grewal, sweeney et al. 2021	Medical students	Voluntary participation	160+123
Anthony-2011	Medical practitioners and medical officers	Stratified random sampling	402
Anthony-2019	Medical specialists, medical officers and house officers	Multistage sampling	100
Garrett-2022	Residents	Convenience sampling	59
Adetayo-2019	Medical professionals (alumni) and trainees	Voluntary participation	521+84
Huebinger et al. 2021	Residents and attendees	Not specified	44+24

Barrett et al.2022	Residents of the surgery program	Convenience sampling	105+23

The table 2 represents the participants in a number of studies fell into the categories of residents[14,16,26,27,28,29,30,31,32] interns, and students[15,17,18,25,33,34] in general medicine and several medical subspecialties. Only a few research have provided medical officials, dentists[23] and practitioners[20] of any significance. In the majority of the research, respondents were given an anonymous electronic survey form[28,30,32] and were only required to participate if they choose to do so voluntarily[15,18,19,23,25]. Studies conducted both before and after the intervention[14,34] used as their samples all those individuals who took part in the relevant course or seminar. Very few studies followed the proper random sampling[20]; stratified random sampling for quantitative work. Two different qualitative research decided to use convenience sampling[16,26]. However the sampling method was not specified in three of the studies[24,29,31] The studies had a range of sample sizes, from 46 to 2806 participants[14,34]. In qualitative research, the number of participants typically ranges from 12 to 128 residents[27,26]

Table3: Study characteristics and research methods

Authors	Study design	Survey instruments	Tools for analysis
Cawyer -2022	Post intervention survey	E-WBI scale and FSS-CV scale	Chi-square, fisher's exact, Wilcoxon's test
Millen, Stacey et al. 2022	Questionnaire survey	Validated FL questionnaire	Multivariate linear regression
Mizell -2019	Pre and post survey for the course	45-item questionnaire	Mann-Whitney tests and content analysis
Poon-2022	Pre and post intervention survey	46 -MCQ -FL	ANOVA, MANAOVA, Post-hoc test, Levene's test and paired t-tests
Neeraj Agarwal et al.2022	Observational cross-sectional survey	OECD- FL questionnaire	Chi-square and Spearman correlation
Jayakumar -2017	Quantitative survey	FINRA-FL questionnaire, Investor Literacy questionnaire and Validated debt literacy questionnaire	ANOVA and logistic regression
Nowotny 2022et al.	Quantitative survey	"Big 5" and "Big 3" FL assessment questionnaire	Descriptive statistics, mean and standard deviation
Ahmad-2017	Cross-sectional anonymous survey	FINRA – FL questionnaire	Chi-square, Fisher's exact and ANOVA
Shappell et al.2018	Qualitative	Semi- structured interviews	Thematic analysis
John D Jennings-2019	Quantitative	14 – questions	Descriptive statistics
Cone et al. 2022a	Quantitative	National financial capability survey questionnaire	Descriptive statistics and one way ANOVA
Glaspy-2005	Quantitative	22 item questionnaires	Descriptive statistics
Teichman et al. 2001	Quantitative	Federal reserve board survey of consumer finances	Chi-square, 2 tailed t-test, Mann-Whitney, Krushal-Wallis test, regression and correlation

Tambolkar et al.2021	Cross sectional questionnaire survey	Pre-validated financial management, investment attitude scale	Mean , SD, Non-Parametric tests and Krushal – Wallis test
Payne -2020	Post-seminar surveys	Not specified	Mean values and pie charts
Grewal, sweeney et al. 2021	Pre and post course survey	10 survey questions (instrument not specified)	Mean scores
Anthony - 2011	Quantitative survey	Not specified	Descriptive statistics, regression, and correlation
Anthony -2019	Control and experimental group intervention	Not specified	ANOVA and Descriptive statistics
Garrett -2022	Qualitative	Interview guides	Thematic analysis
Adetayo-2019	Quantitative	Not specified	Descriptive statistics, pie charts and bar charts
Huebinger et al. 2021	Cross sectional survey	49 item questionnaires on financial literacy and personal finance	T-tests and Wilcoxon rank sum test
Barrett et al.2022	Qualitative	Focused-semi-structured interview guides	Thematic analysis

The above-mentioned table 3 depicting the characteristics and methods of reviewed works. Most of the research is quantitative in their approach (n = 8) [19,34], also they have filed away as cross-sectional surveys (n=5)[25] with anonymity. The aftereffects of taking financial classes or seminars were evaluated in two different studies[14] the comparison analysis was carried out using a survey taken both before and after the intervention (n=3)[15,18,33]. One of the investigations is going to be analyzed using the control and experiment method (n=1)[22]. Three investigations were qualitative (n=3)[16,26,27]

Seven research employed validated named instruments(n=7) such E-WBI scale and FSS-CV scale[14] , OECD- FL questionnaire[19] "Big 5" and "Big 3" FL evaluation questionnaire[24], National financial capabilities survey questionnaire[28] Federal reserve board survey of consumer finances[30] and FINRA – FL questionnaire[25,34]. Other studies reported (n=8)[32,33] just the total number of items and the information on their validity, but they did not release the name of the instrument. In a few of the compositions, neither the scale nor the instrument is stated (n=4)[17,21,22,35]. In addition, qualitative works (n = 3) were responsible for conducting the focused semi-structured interview guides[16,27,26]. Simple calculations, descriptive statistics, mean values, and standard deviation were some of the analytic techniques used[28]. Other tools included analysis of variance[25], t-tests[30] correlation, and regression[21]. In several of the research, the analysis was performed using non-parametric methods such as Chi-square[19,25,30]. Only a few of the research investigated the findings by employing statistical procedures such as Fisher's exact, Wilcoxon's test, Levene's test, Mann-Whitney, and Krushal-Wallis test by utilizing SPSS[14,18,30,33]

Patterns table: According to the findings presented in the table, the majority of the research focused on determining the level of financial knowledge (n=10) possessed by practitioners and medical students [17,18,19,20,24,26,27,28,31,34] .This was followed by investigations into participants' perceptions of psychosomatic factors (n=3) such as attitudes, behaviors and levels of satisfaction concerning financial matters[23,25,32]. In certain research, the objectives are integrated to evaluate both the level of financial skills and the participants' self-induced factors (n = 5)[20,24,26,27,28] .Despite this, there were only studies (n=4) that looked at financial planning and management [21,29,35,36].

Authors	Evaluation of course	Assessment of Competency	Psychosomatic factors	Financial planning/management	Sense of well being	Confidence	Desire for Fiscal education	Financial satisfaction	Personal finance	Investment	Mortgage	Debt management	Budgeting	Retirement planning	Patient billing	Savings	Income tax	Financial Knowledge	Financial behavior/practice	Financial attitudes	Financial principles	Financing for education	Real estates
(Cawyer et al. 2022)	•				•					•		•	•										
(A. & A., 2022)			•															•	•	•			
(Mizell et al. 2019)	•								•														
(Poon et al.2022)		•							•	•	•				•		•						•
(Neeraj Agarwal, 2022)		•								•						•							
(Jayakumar et al. 2017)		•												•								•	
(Nowotny, 2022)		•	•							•						•							
(Ahmad et al. 2017)			•					•		•		•								•			
(Shappell et al., 2018)		•	•						•									•	•				
(John D Jennings et al. 2019)			•									•		•				•					
(Cone et al., 2022)		•	•						•	•								•			•		
(Glaspy et al. 2005)				•			•					•											
(Teichman et al., 2001)				•								•	•	•		•						•	
(Tambolkar et al., 2021)		•	•															•	•	•			
(Payne et al. 2020)		•								•		•	•	•									
(Grewal & Sweeney, 2021)	•					•												•					
(Anthony et al. 2011)				•										•					•	•			•
(Anthony et al. 2019)	•							•											•				
(Garrett et al. 2022)	•				•															•			
(Adetayo et al. 2019)				•						•		•		•									•
(Huebinger et al., 2021)		•				•			•	•	•	•		•		•	•						•
(Barrett et al., 2022)		•	•				•							•		•		•		•			

Legend= • Indicates that the study has investigated the relevant outcomes

Figure2: Financial dimensions considered in studies (n=22)

Figure 2 is designed by the authors to represent the pattern table considering different financial dimensions. The findings of these studies have a variety of implications, but one of the most significant ones is investment decisions(n=9)[18], which is followed by debt management (n=8)[25] and retirement planning (n=8)[34] These findings are relevant for a variety of reasons. The other desired result that was examined was basic financial knowledge (n = 7)[27] and research contributed in an equal amount to both savings (n = 5)[24] and personal finance (n = 5)[31] There were just a handful of studies that produced results that were pertinent to real estate (n = 4)[18] , budgeting (n = 3) e.g., (Cawyer), mortgages (n = 2)[31], income tax planning (n = 2)[18], funding for education (n = 2) [34] financial principles (n = 1) [28] and patient billing (n = 1)[18] On the other hand, researchers also measured the outcomes that were self-induced through the studies. These included things like financial attitudes (n = 6)[25], financial behavior (n = 5)[22], a sense of wellbeing (n = 2)[16], confidence (n = 2)[15] financial satisfaction (n = 2)[22] and a desire for fiscal education (n = 1)[29].

Advances in evidence: Since 2001[30] the study on this topic of financial issues that are significant to doctors has been difficult to discover after periods ranging from four[29] to six[21] years. However, beginning in 2017[25,34] new research was published on an annual basis[17,2227,33,35.] After the year 2020[15,20,31], the number of papers published on this subject grew by a three-fold increase and by October of the year 2022, there were six such publications[23,18,19,28,26]. From the point of view of the researchers, the significance of financial literacy among medical professionals is recognized to a large extent.

The studies that were conducted between 2001 and 2011 had one primary objective: (Teichman, Glaspy and Anthony) to learn about the financial planning and management practices of doctors and the applicability of the results confined to managing debt, preparing for retirement, and having positive financial attitudes. Since 2017, the researchers have been concentrating on the combination of financial literacy and the induced features of doctors (Shappell, Tambolkar, Nowotny, Cone and Barrett).The financial aspects that were being examined during this period included not only an analysis of the monetary content (such as investments, savings, budgeting, etc.) but also of the psychological perspective. (Attitudes towards one's financial situation, including satisfaction, confidence, desire, and behavior) After the year 2019, several pre- and post-intervention works (Mizell, Anthony &Fazil, Grewal& Sweeney, Cawyer, and Garrett) were brought up to date, with the primary emphasis being placed on the introduction of financial courses for medical graduates. The period from 2020-22 saw a growth in the importance of results to patient billing abilities, personal finance, and income tax planning, mortgages, and real estate (Poon and Barrett)

"Patient care, medical knowledge, professionalism, systems-based practice, practice-based learning, and interpersonal and communication skills – The 6 core skills by ACGME" used to be thought of as the sole essential abilities for a doctor to have. However, this view has changed dramatically over the past decade. More and more diseases are being discovered, new medical subspecialties are being developed, and new corporate information systems are being implemented, all of which means that doctors need to be familiar with basic financial concepts. The increasing body of studies, as well as the depth of the discoveries that have been assessed throughout time, are both promising indicators of progress.

IV. Discussion

Study characteristics and gaps: The majority of the research focuses on the United States (n=16), there are a few studies done in the Asian region (n=4) and only study found from the region of upper middle income (South Africa)[23] however, we were unable to locate any studies from other nations with lower middle incomes. Because student loan debt is a significant obstacle for medical students, particularly those coming from nations with lower incomes, having a solid understanding of finance is essential for a career in medicine. It was discovered that big research was carried out in a single organization or at the most two to three institutions[25,26,29] The direction of the research might be skewed if we generalize the findings of only one or two medical centers. We could locate a few studies involving multi-states, provinces, and centers[20,22.] The category of respondents is comprised primarily of students and residents[34]. The adult group of practicing doctors and senior professionals was only discovered in three research [20,21,23]. However, several studies attempted to examine students' perspectives on retirement planning, although this is a topic that is unrelated to their age and is unknown to them since they are handling their educational debts. Participants from a very small number of medical subspecialties, such as obstetrics and gynecology[14], urology[30] emergency medicine[29,] orthopedics[28] and plastic surgery[35], were chosen for research. Some medical specializations, including cancer and cardiology, are currently rising fields of medicine, and professionals in these fields are making a lot of money as a direct result of the upward trend of their respective diseases. This particular demography has not yet been the subject of any studies about this issue.

The majority of research used a cross-sectional quantitative survey methodology, whereas just a small number employed a qualitative approach. The survey is defined by baseline and follow-up assessments at

predetermined academic or healthcare institutions. There may be greater value in using alternative methods, such as in-depth interviews, focus groups, or key informant interviews, rather than relying on specialized surveys. There are a number of studies that have employed samples of over 1,500 persons; nevertheless, it appears that the great majority of samples were obtained from only a select number of institutions, making it difficult to draw general judgments from the data. While some studies may have used validated measures, the vast majority relied on participant input when creating surveys. Descriptive statistics, analysis of variance, t-tests, correlation, and regression were all utilized in several of the investigations. There were no scale validation studies located for the evaluation of medical professionals' financial literacy, and the studies that did employ instruments did not verify their psychometric features (EFA, SEM and piloting a tool).

Patterns and gaps: The majority of the research aimed to determine the level of financial knowledge was done on physicians to evaluate the efficiency of various financial courses or programs. The result was assessed by the standards of whether or not it was effective[17,15]. However, determining the independent and dependent determinants for financial competency, as well as moderators, mediators, and their link to the chain of causation, has not yet been examined. When looking at the relevant research, the conclusions found that investing, debt management, and retirement planning were accorded the most priority[19,20]. The researchers were also interested in topics about personal finance and savings. However, relatively little research focused on financial planning topics such as budgeting and income tax, although they are essential components for future career planning for physicians. The billing of patients is an essential job responsibility for all doctors, regardless of whether they operate in large institutions or their own private nursing homes; nevertheless, only one research has documented this ideal notion.

Advances in evidence and gaps: Even if there has been a marked increase in the amount of study conducted over the past 20 years, many different settings still include examples of the same works. (After the courses and seminars, there will be a post-intervention survey conducted using questions that have been specifically customized for each educational establishment.) When considered from a corporate perspective, medical professionals are always treated as employees; hence, the study is limited to financial matters such as investments, savings, and debt management. Because they are the proprietors of nursing homes, the only financial processes they are responsible for are the physical setup of the facility and the invoicing of patients. Being corporate leaders, they will be expected to have a deeper comprehension of economics and finances. However, they cannot complete large-scale deals without the assistance of financial backers. No scenario has, yet, been used to research the topic of the financial leadership provided by medical practitioners.

Limitations: There are various caveats to this scoping review. To begin, it is important to note that some research may have been missed even though the search for studies was planned and executed with great care. In addition, no grey literature has been analyzed to create a research landscape map. This includes reports and policies written by professionals in the healthcare industry as well as government papers. Towards this end, no temporal restrictions were placed on the research that was assessed for eligibility: Therefore, the included research was published between the years 2000 and 2022, and caution should be used when interpreting their conclusions, since the monetary significance of health care may change over time. No quality evaluation according to the Arksey and O'Malley guidelines was performed on the included studies (2005). We organized the results and discussion using the PAGER framework (Bradbury-Jones et al., 2021) since scoping reviews aim to fill knowledge gaps. The PAGE structure's uniqueness and lack of instances need significant attentiveness. The study team found substantial patterns and information gaps. Researchers' biases may have influenced how they viewed data and where they searched for abnormalities.

V. Conclusion

Doctors' fiscal aptitude has been studied for years, yet global research outputs vary significantly, indicating a need for greater investment and interdisciplinary collaboration. The focus must shift from merely defining financial competencies to developing and cultivating them in ways that influence clinical decisions and healthcare outcomes. Robust research should guide how to embed these skills into everyday practice, moving beyond reactive strategies to proactively fill existing gaps in financial sustainability. Enhancing doctors' financial literacy can empower them to make quality-driven, cost-effective decisions and reduce their dependency on external decision-makers. From students to senior clinicians, incorporating financial acumen into medical education supports personal and professional growth. Financially literate doctors can better guide patients, manage resources, and contribute to healthcare system improvements. Ultimately, integrating financial literacy into medical training is essential for advancing the profession in today's economically complex healthcare landscape. The financial literacy of doctors holds significant clinical importance, directly impacting both patient care and the healthcare system's sustainability. Financially astute physicians can optimize resource

allocation, advocate for cost-effective treatments, and engage in transparent discussions about care expenses, fostering patient trust and adherence. This expertise also enhances institutional efficiency through improved budgeting, revenue cycle management, and strategic investments in technology. Ultimately, equipping doctors with financial acumen leads to better-informed clinical decisions, reduced financial stress for practitioners, and a more robust, patient-centered healthcare environment.

List Of Abbreviations:

1. **PRISMA-ScR:** Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews
2. **PAGER:** Patterns, Advances, Gaps, and Evidence for practice and Research recommendations
3. **PCC:** Population, Concept, and Context
4. **MeSH:** Medical Subject Headings
5. **EHR:** Electronic Health Record
6. **ACGME:** Accreditation Council for Graduate Medical Education
7. **MCI:** Medical Council of India
8. **UG:** Undergraduate
9. **ROI:** Return on Investment
10. **AI:** Artificial Intelligence
11. **NLP:** Natural Language Processing
12. **XAI:** Explainable AI
13. **E-WBI scale:** (Not explicitly expanded in the text, but implied as a well-being scale)
14. **FSS-CV scale:** (Not explicitly expanded in the text, but implied as a financial scale)
15. **MCQ-FL:** Multiple Choice Questions - Financial Literacy
16. **OECD-FL questionnaire:** Organisation for Economic Co-operation and Development - Financial Literacy questionnaire
17. **FINRA-FL questionnaire:** Financial Industry Regulatory Authority - Financial Literacy questionnaire
18. **ANOVA:** Analysis of Variance
19. **MANAOVA:** Multivariate Analysis of Variance
20. **SD:** Standard Deviation
21. **SPSS:** Statistical Package for the Social Sciences
22. **EFA:** Exploratory Factor Analysis
23. **SEM:** Structural Equation Modeling
24. **RIA:** Registered Investment Advisor

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