



# Financial Literacy and Physician Wellness: Can a Financial Curriculum Improve an Obstetrician/Gynecologist Resident and Fellow's Well-Being?

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## Abstract

**Objective** This study aimed to evaluate the effects of a financial literacy curriculum on resident and fellow's sense of well-being and financial stress.

**Study Design** This single institution pilot study prospectively enrolled obstetrician/gynecologist (OB/GYN) medical trainees (residents and fellows) to take part in a five-part personal financial literacy curriculum during the 2019 to 2020 academic year. Topics covered included the following: financial education and its relationship to personal well-being, overview of financial terms and principles, budgeting, debt planning, and investing and giving. Primary outcomes were the improvement in well-being as measured by the Expanded Well-Being Index (E-WBI) and financial stress as measured by the Financial Stress Scale-College Version (FSS-CV) survey.

**Results** Of the 35 residents and fellows who participated in the study, 21 (60%) completed the postintervention survey. After course completion, there was significant improvement in the individual's E-WBI ( $p < 0.05$ ) and no significant improvement in their FSS-CV ( $p = 0.06$ ). After completing the course, trainees agreed that financial literacy improved their sense of well-being ( $p = 0.018$ ).

**Conclusion** Cultivating financial literacy is associated with an improvement in the sense of well-being in residents and fellows and should be considered for inclusion in other graduate medical education (GME) programs.

## Keywords

- ▶ physician burnout
- ▶ personal financial planning
- ▶ financial literacy
- ▶ physician wellness

The heart of medicine has been improving patient's health and overall well-being but over the last 10 to 15 years, there has been an added focus on the well-being of the physicians who take care of these patients.<sup>1</sup> As physician burnout and a

poor sense of well-being can lead to worse patient outcomes and patient dissatisfaction, many professional organizations have implemented programs to help improve physician job satisfaction.<sup>2</sup> Although many programs have been shown to

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improve physician well-being, none have focused on improving financial literacy.<sup>3</sup>

Physicians in training have previously demonstrated a strong desire for a personal finance curriculum within their training programs.<sup>4,5</sup> This absence of financial literacy education is concerning as financial stress is associated with greater anxiety, depression, and alcohol dependency,<sup>6</sup> and also conditions that residents and fellows are already more at risk for than the general population.<sup>7</sup>

Expanding financial literacy could be a part of the solution, as more than 90% of resident physicians feel that they are unable to handle their finances.<sup>8</sup> This number is alarming as financial stressors lead to higher job dissatisfaction.<sup>9</sup> Other industries have already shown that formalized personal finance education improves financial literacy and in turn one's sense of prosperity and job satisfaction.<sup>10</sup> However, there has yet to be any study examining the effects of a personal finance curriculum on a physician's sense of well-being and financial stress.

We hypothesize that when a personal finance curriculum is provided to residents and fellows, they will demonstrate an improvement in their sense of well-being and experience a decreased amount of financial stress.

## Materials and Methods

This was a prospective cohort study that measured obstetrician/gynecologist (OB/GYN) resident and fellow's sense of well-being and financial stress through validated surveys before and after implementation of a personal finance curriculum. All 46 OB/GYN residents and fellows at a single institution and currently enrolled in the graduate medical education (GME) program were invited to participate in the personal finance curriculum.

Our intervention consisted of a five-part personal finance curriculum (45 minutes each) that was performed by the primary author throughout the 2019 to 2020 academic year. The primary author has spent the last 5 years in both a formal and informal capacity for advising physicians on their finances. The covered topics were chosen based on the primary authors experience, as well as what trainees have previously expressed interest in learning.<sup>5,11</sup> These included the following: (1) personal finance education and its relationship to well-being, (2) an overview of financial terms and principles, (3) budgeting, (4) debt planning, and (5) investing and giving (► **Fig. 1**). The first three topics were given in a live round-table discussion format. A formal presentation was used as the background with free-flowing discussion throughout. The final two presentations were moved to a video-conferencing application (due to the novel coronavirus disease 2019 [COVID-19] pandemic) and involved a lecture format followed by question and answer (Q&A) session. Following each lecture, the presentation was provided in a PowerPoint PDF document with a modified transcript of what was discussed. This was available to all residents and fellows to educate those who were unable to participate in the live sessions and review at their own discretion.

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- 1) Introduction: Financial principles for the young physician
    - Personal finance education and its relationship to well-being
  - 2) Back to basics: Personal finance 101
    - An overview of financial terms and principles
  - 3) Cash flow planning: The blueprint for success
    - Budgeting
  - 4) Minimizing liabilities: Taxes, insurance & loans
    - Debt planning
  - 5) Building a financial legacy: letting money work for you ...and others
    - Investing and giving

**Fig. 1** The list of covered topics that topics were chosen based on the primary authors experience, as well as what trainees have previously expressed interest in learning.

All OB/GYN trainees who were able and willing to participate in the study were asked to take a pre- and postintervention survey. The primary outcomes were trainee financial health and stress as measured by both the previously validated the 9-Item Expanded Well-Being Index (E-WBI) and the 13-question Financial Stress Scale-College Version (FSS-CV) survey.<sup>12,13</sup> Two primary outcomes were included as well-being can be multifactorial and not directly related to financial stress.<sup>12</sup> Secondary outcomes included resident and fellow attitudes and comfort levels on the role of financial education in a medical curriculum. These attitudes were recorded based on a 7-point Likert's scale. Questions were chosen based on previously described physician attitudes toward financial education.<sup>4,5,8,11</sup> Those who declined to take the surveys were excluded from analysis but were still be able to actively participate in all facets of the personal finance curriculum.

Our sample size was limited by the set number of OB/GYN trainees, 46 total. However, with a mean FSS-CV score of  $22.54 \pm 7.39$ , we calculated the ability to detect a 20% improvement in FSS-CV score with 80% power and 0.05  $\alpha$  if 43 residents/fellows participate. Given this would involve a difficult to achieve 95% participation rate, we acknowledged our limitations beforehand in failing to reject the null hypothesis in the event; no statistical significance was achieved.

All data were captured directly into the study database developed with the Research Electronic Data Capture (REDCap).<sup>14</sup> Exposure groups were compared using Chi-square, Fisher's exact, and Wilcoxon's tests as appropriate. The statistical analysis was performed using SAS 9.4 (Cary, NC) with significance level at 0.05. Institutional review board review was provided and obtained given all residents could opt out of study participation by not completing the surveys.

## Results

Out of the eligible resident and fellows, 35 agreed to participate in the study by taking the initial survey. The representation included a majority of those who identify as predominantly female which is representative of the GME program's demographics. They also were well distributed between lower level residents, upper level residents, and fellows (► **Table 1**). Of those who agreed to participate in the

**Table 1** Personal characteristics of the OB/GYN residents and fellows

	Presurvey (n = 35)	Postsurvey (n = 21)	p-Value
Level of training (n = 47)			
Lower level resident (PGY 1–2)	14 (40.0)	10 (47.6)	0.16
Upper level resident (PGY 3–4)	10 (28.6)	9 (42.9)	
Fellow (PGY 5–7)	11 (31.4)	2 (9.5)	
Female (%)	27 (77.1)	16 (76.2)	> 0.99
Shares finances with partner	22 (62.9)	14 (66.7)	0.77
Manages self/household finances	23 (65.7)	13 (61.9)	0.77

Abbreviations: OB/GYN, obstetrician/gynecologist; PGY, postgraduate year.  
Note: Data presented as n (%).

study by taking the first survey, 21 of 35 (60%) took part in the follow-up survey. The mean number of individual course lectures attended during a live session was around 3 (►Table 2).

There was a significant improvement in the median expanded well-being index score after exposure to the personal finance curriculum (2 vs. 1,  $p \leq 0.05$ ). There was no significant difference in the median financial stress scale survey before and after the personal finance curriculum (22 vs. 20,  $p = 0.06$ ; ►Table 3). Residents and fellows expressed a better understanding of financial planning topics (4 vs. 5,  $p = 0.007$ ) and the financial industry (3 vs. 5,  $p \leq 0.001$ ). After completing the curriculum, there was a significantly stronger agreement that financial literacy improves their sense of well-being (4 vs. 5,  $p = 0.018$ ; ►Table 4).

## Discussion

In this prospective study, OB/GYN residents and fellows who participated in a personal finance curriculum showed improved well-being as scored by the E-WBI. In addition, the

**Table 2** OB/GYN resident/fellow exposure and participation in the personal finance curriculum

Trainees who participated in the follow-up survey	21/35 (60)
Average number of presentations they attended live	2.8 ± 1.2
Average number of watched on own when missed live	0.6 ± 1.1
Trainees who revisited any presentation they attended in person	7/21 (33.3)

Abbreviation: OB/GYN, obstetrician/gynecologist.  
Note: Data presented as n (%) or mean ± standard deviation as appropriate.

**Table 3** Expanded well-being index and financial stress scores before and after exposure to the personal finance curriculum

	Presurvey (n = 35) Median (Q1–Q3)	Postsurvey (n = 21) Median (Q1–Q3)	p-Value
The Expanded Well Being Index	2 (1–5)	1 (0–3)	0.049
The Financial Stress Scale-College Version Survey	22 (17–26)	20 (18–23)	0.06

trainees agreed that financial education improved their sense of well-being.

Financial literacy programs are a common occurrence across multiple groups and industries, including those within health care.<sup>10,15–17</sup> Although measured outcomes and goals of programs differ, common findings include the desire for financial literacy and an appreciation for the obtained knowledge. Programs that have specifically assessed physician attitudes toward a personal finance curriculum have all consistently showed residents' and fellows' desire to improve their financial literacy.<sup>4,5,8,11,18</sup> As studies have shown the appetite for financial literacy is apparent, ours is the first to directly measure its association with physician well-being and financial stress.

Physician well-being is a complex concept that involves multiple inputs, including work–life balance, quality of life, resilience, mindfulness, coping strategies, and mood.<sup>19</sup> Financial well-being is not included in this list; however, financial stress and strain play a direct roll on our self-efficacy beliefs and mental health.<sup>20</sup> With improved financial literacy, it is logical that financial stress will decrease<sup>9</sup> and in turn improve most of the components of physician well-being.

**Table 4** Trainee attitudes on financial education

	Presurvey (n = 35)	Postsurvey (n = 21)	p-Value
Education in personal financial planning is important to me	5 (4–6)	6 (5–6)	0.14
I believe I will be able to meet my financial goals within a reasonable time	4 (4–5)	5 (5–6)	0.007
I have a working understanding of personal financial planning topics	4 (3–5)	5 (4–6)	0.012
I have a working understanding of the financial services industry	3 (2–5)	5 (4–5)	< 0.001
Education in personal financial planning helps my sense of well-being	4 (4–5)	5 (5–6)	0.018
I am personally comfortable handling my own finances	4 (3–5)	5 (4–5)	0.08

Note: Data presented as median (Q1–Q3) based on 7-point Likert's scale (1, very strongly disagree; 2, strongly disagree; 3, disagree; 4, neutral; 5, agree; 6, strongly agree; and 7, very strongly agree).

Burnout and work-related stress have been described as a “mismatch between the perception of what is expected and the reality of what is possible.”<sup>21</sup> We would concur that all stress can be decreased when expectations and reality become more in line. When a resident or fellow goes through a personal finance curriculum, they are exposed to the reality of the financial world. This in turn creates more realistic financial expectations and in turn decreases financial stress. Although we did not show a significant difference in the course decreasing financial stress, this was likely due to being underpowered and not due to the lack of association.

## Limitations

Although our study is the first to demonstrate an association with financial education and physician well-being, it is not without limitations. The first involves the unmasking of the participants. The residents and fellows in our GME program were notified beforehand that they were participating in a study assessing the potential benefits of a personal finance curriculum. This knowledge could have led to the Hawthorne effect. However, the participants were not aware of the specific outcomes being measured or the scoring system, limiting result bias. In addition, those who saw no benefit to the course may have declined to participate in the post-intervention survey biasing our intervention results away from the null hypothesis. Another notable limitation relates to the generalizability. This education initiative was given at a single site, to a single specialty, and specific to residents and fellows. Both medical students and faculty have a different set of financial needs and our personal finance curriculum may not show the same association in these groups. Plus pay differs substantially between subspecialties and geographic regions which could have a bearing on how applicable the curriculum may be to all GME programs.<sup>22</sup> In addition, the external validity of this study is not apparent. This course consisted of five parts and given by one individual. Our study is unable to distinguish if the association between the personal finance curriculum and improved well-being is due to the instructor and specific course design or becoming more financial literate in general. A final limitation is that surveys were given during an unprecedented time for medical education. The distribution to program structures and resident and fellow schedules due to the COVID-19 pandemic cannot be quantified. It is difficult to evaluate if the improvement in scores was due to the personal finance curriculum or other circumstantial changes. Despite the fact that stress and anxiety levels of residents/fellows were increasing during the COVID-19 pandemic,<sup>23</sup> our trainees showed an improvement in the well-being index. This may further substantiate our findings that financial literacy improves one’s sense of well-being. We also witnessed that residents or fellows do not need to be exposed to a whole personal financial curriculum to see benefit. The median attendance for residents and fellows were 2.8 lectures, just over 50% of the entire curricula. Even a small amount of an exposure to monetary topics can improve one’s financial literacy and well-being.

Given the overarching limitations of our study, further studies must be done. It should be evaluated at other GME sites and in different specialty programs which we are evaluating following this pilot. In addition, separate studies should be done to assess the effect on medical students. Furthermore, other curricula need to be evaluated to discover if improvement is due to a specific course structure or if it is the financial education itself that is associated with an improved sense of well-being.

## Conclusion

In conclusion, we demonstrated that a personal financial course is associated with an improvement in a resident and fellow’s sense of well-being. Incorporation and further study of a personal finance component into the wellness curriculum should be considered by all OB/GYN programs.

### Conflict of Interest

The primary author is a registered investment advisor with Navigo Wealth Management.

## References

- Shanafelt TD, Sloan JA, Habermann TM. The well-being of physicians. *Am J Med* 2003;114(06):513–519
- Wright AA, Katz IT. Beyond burnout - redesigning care to restore meaning and sanity for physicians. *N Engl J Med* 2018;378(04):309–311
- Wiederhold BK, Cipresso P, Pizzioli D, Wiederhold M, Riva G. Intervention for physician burnout: a systematic review. *Open Med (Wars)* 2018;13:253–263
- Bar-Or YD, Fessler HE, Desai DA, Zakaria S. Implementation of a comprehensive curriculum in personal finance for medical fellows. *Cureus* 2018;10(01):e2013
- McKillip R, Ernest M, Ahn J, Tekian A, Shappell E. Toward a resident personal finance curriculum: quantifying resident financial circumstances, needs, and interests. 2018;10(04):e2540
- Richardson T, Elliott P, Roberts R, Jansen M. A longitudinal study of financial difficulties and mental health in a national sample of British undergraduate students. *Community Ment Health J* 2017;53(03):344–352
- Mata DA, Ramos MA, Bansal N, et al. Prevalence of depression and depressive symptoms among resident physicians: a systematic review and meta-analysis. *JAMA* 2015;314(22):2373–2383
- Mizell JS, Berry KS, Kimbrough MK, Bentley FR, Clardy JA, Turnage RH. Money matters: a resident curriculum for financial management. *J Surg Res* 2014;192(02):348–355
- Bailey WC, et al. The relationship of financial stress to overall stress and satisfaction. *Personal Finances Worker Productivity* 1998;2(02):198–207
- Tahira H, Căzilia L. Understanding the impact of employer-provided financial education on workplace satisfaction. *J Consum Aff* 2005;39(01):173–194
- Shappell E, Ahn J, Ahmed N, Harris I, Park YS, Tekian A. Personal finance education for residents: a qualitative study of resident perspectives. *AEM Educ Train* 2018;2(03):195–203
- Dyrbye LN, Satele D, Shanafelt T. Ability of a 9-item well-being index to identify distress and stratify quality of life in US workers. *J Occup Environ Med* 2016;58(08):810–817
- Northern JJ, O’Brien WH, Goetz PW. The development, evaluation, and validation of a financial stress scale for undergraduate students. *J Coll Student Dev* 2010;51(01):79–92

- 14 Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform* 2009;42(02):377–381
- 15 Lusardi A, Mitchell OS. Financial literacy around the world: an overview. *J Pension Econ Finance* 2011;10(04):497–508
- 16 Chui MA. An elective course in personal finance for health care professionals. *Am J Pharm Educ* 2009;73(01):6
- 17 Stylianou AM, Counselman-Carpenter E, Redcay A. Developing a financial literacy program with survivors of intimate partner violence: the voices of survivors. *Soc Work* 2019;64(04):311–320
- 18 Boehnke M, Pokharel S, Nyberg E, Clark T. Financial education for radiology residents: significant improvement in measured financial literacy after a targeted intervention. *J Am Coll Radiol* 2018;15(1, pt. A):97–99.e1
- 19 Lall MD, Gaeta TJ, Chung AS, et al. Assessment of physician well-being, part two: beyond burnout. *West J Emerg Med* 2019;20(02):291–304
- 20 Turunen E, Hiilamo H. Health effects of indebtedness: a systematic review. *BMC Public Health* 2014;14:489
- 21 Hajela R. Burnout or mismatch between expectations and reality? *Can Fam Physician* 2012;58(09):929, author reply 929
- 22 Kane L. Physician Compensation Report 2019. New York, NY: Medscape; 2019
- 23 Nanjundaswamy MH, Pathak H, Chaturvedi SK. Perceived stress and anxiety during COVID-19 among psychiatry trainees. *Asian J Psychiatr* 2020;54:102282