

Effectiveness of Seminar Based Approach on the Level of Financial Literacy among Dental Students of Central Gujarat

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ABSTRACT

Introduction: Financial literacy refers to knowledge and skills related to effective and informed money management decisions. Healthcare professionals graduate with some of the highest student loan debt level. They complete their graduation with minimal unbiased financial planning guidance.

Aim: To assess the effectiveness of seminar based approach on the level of financial literacy among dental students of Vadodara, Gujarat, India.

Materials and Methods: This prospective interventional study was conducted in Vadodara, Gujarat, India from May 2021 to October 2021. The data was collected from 332 participants through a closed-ended questionnaire which included 83 statements related to banking, alternate banking, investment and income and expenditure. The data was assessed using Paired t-test to

assess the effectiveness of financial education seminar at 95% confidence level. The software used was IBM Statistical Package for the Social Science (SPSS) Version 21.0 for Windows.

Results: This study included 332 interns and postgraduate students, of which 209 participants were female while 123 participants were male. There was a significant difference in the knowledge of students on various financial aspects covered in the study before and after the seminar with respect to gender, age and category of students (p-value <0.05). There was a significant difference in the knowledge of participants before and after the seminar on financial literacy (p-value <0.001)

Conclusion: The result shows that the score of the participants improved after the 90 minutes seminar which would be helpful to them for their future long-term investment decisions.

Keywords: College, Financial inclusion, Interns, Postgraduates

INTRODUCTION

Over the last decade, the Indian economy has grown at a rapid pace [1]. The growth of any country depends upon financial system. Financial inclusion is the top most priority for Government of India. Financial educations play a vital role for improving the growth of the country as well as the standard of living of the people [1].

Financial literacy is the process of acquiring knowledge about financial products, understanding the concept of tradeoff between risk and return, utilising the knowledge to make informed choices and appreciating the available professional knowledge. In today's healthcare environment healthcare professionals training programs are facing multiple challenges [2]. Healthcare professionals earn high salaries after their graduation, after spending huge amount of money during their course. Ironically, the start of their career after the graduation begins with a debt either because they intend to set-up their own clinical practice or pursue higher education, both of which requires high amount of money [3].

Healthcare professionals complete education having received minimal unbiased financial planning guidance. Some of them rely on assistance from grants, scholarships, parental contributions, or part-time jobs to pay for the costs of tuition [4]. They begin their career with high amount of investment, but being unaware about the strategies of investment may lead to a lot of money wastage. Therefore, it is necessary to provide them with complete unbiased financial education and empower them to make timely constructive financial decisions [5].

On literature search, no studies on financial literacy among dental students were found from India. However, there have been similar studies conducted outside India [2,3]. Thus the aim of this study was to assess the effectiveness of seminar based approach on the level of financial literacy among dental students of Central Gujarat. The study would help the various dental colleges, respective councils to plan a program to instill the knowledge of basic financial aspects for their regular daily activities.

The null hypothesis was that there is no difference in the knowledge with respect to banking, alternate banking, investment and income and expenditure among dental students before and after the seminar on financial literacy.

MATERIALS AND METHODS

This prospective interventional study was conducted among the interns and postgraduates of Dental Colleges of Central Gujarat, between May 2021 and October 2021. The Ethical permission for conducting the study was received on 10th March 2021 [SVIEC/ON/MBA/PhD/21004]. The knowledge of the budding dental professionals was assessed before and after the intervention of 90 minutes of seminar on financial aspects.

Inclusion criteria: Interns and postgraduates students of Dentistry, who were willing to participate and signed the informed consent were included.

Exclusion criteria: Students who were absent on the date of post financial education data collection and unwillingness to participate were excluded.

Sample size calculation: There were nine dental colleges in Central Gujarat out of which six dental colleges allowed for data collection. The data was collected from 332 participants through a closed-ended questionnaire which included 83 statements related to Banking, alternate banking, investment and income and expenditure. The sample size calculated was 332 using the following formula:

$$\text{Sample size (n)} = \frac{N}{(1 + Ne^2)}$$

Where, Total population=N=1952; Margin of error=e=0.05 at 95% confidence level

Questionnaire

The questionnaire tool was close-ended. It was divided into five sections. The first section comprised of demographic details, section

two to five comprised of 83 statements altogether on aspects like banking (39 Statements), alternate banking (8 Statements), investment (29 Statements), income and expenditure (7 Statements), respectively. These statements evaluated the knowledge through true, false and don't knows options. The respondents who marked incorrect (false and don't know) response were marked 0 for the concerned question while the participants who marked correct (true) response were marked 1 for the respective question. The total score obtained in each of the four sections was analysed with respect to gender, age and category of respondents. The questionnaire was prepared after a thorough review of literature and was content validated by the experts [4-6]. A pilot study was carried out to check the reliability of the respondents. The cronbach's alpha value came to be 0.89 (p-value=0.004) indicating the high reliability of the respondents.

After analysing the pretest responses gathered from the questionnaire, a 90 minutes seminar focussing on types of bank accounts, digital banking, credit card, debit card, Society for Worldwide Interbank Financial Telecommunications (SWIFT), Non Banking Financial Companies (NBFC), stock market, savings, Investment, Expenses etc. after which a self learning module was provided to the respondents for thoroughness in the financial literacy. The seminar was carried out by principal investigator who is financial expert. After a month's time, the same questionnaire was distributed amongst the same respondents to check for the effectiveness of seminar on financial literacy.

STATISTICAL ANALYSIS

The collected data of pre and postfinancial education seminar was analysed with the use of SPSS version 21.0. The data was analysed by using the frequency distribution and Paired Sample t-test at 5% (p-value <0.05) significance level.

RESULTS

The study included 209 (62.95%) female participants and 123 (37.05%) male participants. Out of total, 269 (81.02%) participants were interns and 63 (18.98%) participants were postgraduates [Table/Fig-1].

Demographic factor	Options	Frequency (n)	Percentage (%)
Gender	Female	209	62.95
	Male	123	37.05
Age (in years)	Less than 25 years of age	262	78.92
	Greater than or equal to 25 years of age	70	21.08
Category	Intern of dental college	269	81.02
	Postgraduates of dental college	63	18.98

[Table/Fig-1]: Frequency distribution of dental students.

The mean score before the seminar among the respondents related to banking was 16.57±4.09; alternate banking 2.00±1.49; investment 10.92±4.87 and income and expenditure 2.82±1.59. The average mean score and standard deviation of respondents after the seminar among the respondents related to banking 26.58±3.68; alternate banking 5.39±1.32; investment 21.28±2.59 and income and expenditure 4.91±1.24. There is a significant difference in the knowledge score before and after the seminar as the p-value is less than 0.05 [Table/Fig-2].

[Table/Fig-3] describes the difference in mean score and standard deviation of financial literacy pre and post the seminar amongst female and male. Here, the result shows that there was a significance difference in the knowledge of participants before and after the seminar on financial literacy among both the gender (p-value <0.001). Hence, the null hypothesis is rejected.

Financial statements	Respondents	Minimum score	Maximum score	Mean±SD	p-value
Preseminar banking knowledge score	332	0.00	26.00	16.57±4.09	0.011
Postseminar banking knowledge score	332	18.00	34.00	26.58±3.68	
Preseminar alternate banking knowledge score	332	0.00	6.00	2.00±1.49	0.013
Postseminar alternate banking knowledge score	332	3.00	7.00	5.39±1.32	
Preseminar investment knowledge score	332	0.00	23.00	10.92±4.87	0.023
Postseminar investment knowledge score	332	14.00	28.00	21.28±2.59	
Preseminar income and expenditure knowledge score	332	0.00	6.00	2.82±1.59	0.049
Postseminar income and expenditure knowledge score	332	2.00	6.00	4.91±1.24	

[Table/Fig-2]: Descriptive statistics of before and after seminar amongst the respondents pertaining to banking, alternate banking, investment and income and expenditure.

p-value <0.05 was considered to be significant.

Part I: Knowledge before and after the seminar on financial literacy in females (n=209)

Financial planning	Mean±SD	Mean difference	t-value	p-value
Banking related knowledge				
Pretest	17.00±4.01	-9.69	-28.58	<0.001
Post-test	26.69±3.63			
Alternate banking knowledge				
Pretest	1.95±1.41	-3.39	-24.05	<0.001
Post-test	5.34±1.31			
Investment knowledge				
Pretest	11.05±4.83	-10.36	-27.74	<0.001
Post-test	21.41±2.54			
Income and expenditure knowledge				
Pretest	2.92±1.60	-1.98	-14.09	<0.001
Post-test	4.90±1.24			

Part II: Knowledge before and after the seminar on financial literacy in males (n=123)

Financial planning	Mean±SD	Mean difference	t-value	p-value
Banking related knowledge				
Pretest	16.15±3.95	-10.21	-20.44	<0.001
Post-test	26.37±3.78			
Alternate banking knowledge				
Pretest	1.94±1.61	-3.51	-17.98	<0.001
Post-test	5.45±1.33			
Investment knowledge				
Pretest	10.67±5.18	-10.36	-19.16	<0.001
Post-test	21.04±2.65			
Income and expenditure knowledge				
Pretest	2.73±1.56	-2.17	-12.62	<0.001
Post-test	4.90±1.23			

[Table/Fig-3]: The difference in the knowledge with respect to gender. Paired sample t-test; p-value <0.05 was considered to be significant.

[Table/Fig-4] describes the difference in mean score and standard deviation of financial literacy pre and post the seminar amongst less than 25 years and greater than 25 years. Here, the result shows that

Part I: Knowledge before and after the seminar on financial literacy in age (Less than 25 years)				
Financial planning	Mean±SD	Mean difference	t-value	p-value
Banking related knowledge				
Pretest (262)	16.95±4.03	-9.55	-30.49	<0.001
Post-test (262)	26.50±3.65			
Alternate banking knowledge				
Pretest (262)	1.97±1.48	-3.35	-25.94	<0.001
Post-test (262)	5.33±1.35			
Investment knowledge				
Pretest (262)	11.03±4.83	-10.23	-28.86	<0.001
Post-test (262)	21.27±2.71			
Income and expenditure knowledge				
Pretest (262)	2.90±1.60	-1.97	-16.24	<0.001
Post-test (262)	4.88±1.25			
Part II: Knowledge before and after the seminar on financial literacy in age (Greater than 25 years)				
Financial planning	Mean±SD	Mean difference	t-value	p-value
Banking related knowledge				
Pretest (70)	15.72±3.76	-11.13	-17.86	<0.001
Post-test (70)	26.85±3.81			
Alternate banking knowledge				
Pretest (70)	1.85±1.48	-3.72	-15.43	<0.001
Post-test (70)	5.58±1.17			
Investment knowledge				
Pretest (70)	10.47±5.43	-10.84	-17.82	<0.001
Post-test (70)	21.31±2.08			
Income and expenditure knowledge				
Pretest (70)	2.65±1.55	-2.34	-9.46	<0.001
Post-test (70)	5.00±1.16			

[Table/Fig-4]: The difference in the knowledge with respect to age. Paired sample t-test; p-value <0.05 was considered to be significant

Part II: Knowledge before and after the seminar on financial literacy in postgraduates of dental colleges				
Financial planning	Mean±SD	Mean difference	t-value	p-value
Banking related knowledge				
Pretest (63)	15.88±3.85	-11.00	-16.78	<0.001
Post-test (63)	26.88±3.73			
Alternate banking knowledge				
Pretest (63)	1.89±1.53	-3.67	-14.29	<0.001
Post-test (63)	5.56±1.19			
Investment knowledge				
Pretest (63)	10.64±5.49	-10.70	-16.50	<0.001
Post-test (63)	21.34±1.85			
Income and expenditure knowledge				
Pretest (63)	2.56±1.51	-2.44	-9.42	<0.001
Post-test (63)	5.00±1.17			

[Table/Fig-5]: The difference in the knowledge with respect to category. p-value <0.05 was considered to be significant; Paired sample t-test

DISCUSSION

This present study result shows that the knowledge of the respondents were less pertaining to banking, alternate banking, investment and income and expenditure with respect to gender, age and category. Ahmad FA et al., 2017 observed that residents' and fellows' knowledge was low in basics of financial concepts like savings, debt management, long-term planning etc [3]. The result of the study showed that the basics of financial literacy would affect their personal financial decisions. From this study, it has been found that the knowledge of the respondents increased through the seminar on financial literacy which would be helpful to them for future finance decisions hence rejecting the null hypothesis. Therefore, adding the topic of personal finance management in the healthcare professional's education curriculum would benefit them.

As a study by Shahrabani S, 2013 [7] in Israel found that the level of financial literacy was very low with respect to gender, nationality, class rank and work experience [7]. The result of study shows that even after the financial crisis Israeli students still have large gaps in their understanding of economic terms. Therefore, it is necessary to include basics of finance education in college curriculum. The knowledge of the respondents of this study also suggests that it is better to provide the basic of finance during their education in schools as well as in university curriculum.

A study by Ibrahim ME and Alqaydi FR, 2013 focused on personal debt with pertaining to bank, borrowings and credit card of individual residing in UAE [8]. This studies shown that the knowledge of the respondents were below the average level. Through the current study also it has been found that the knowledge of the respondents were below average in the areas like banking, loan and credit cards.

Due to increase in the number of dental colleges and dentist population ratio in urban sector compared with that of rural sector, the survival of the dentists has become a challenge. It is necessary for the dentistry graduates should have knowledge on practice management and financial management to become successful entrepreneurs and also to succeed in their life. Parija SC and Shivasakthy M, 2019 had found that the dentistry graduates must aware the fundamental knowledge on financial skills at the time of work setup [9]. They should be able to know the difference between 'want' and 'need' to setup a quality healthcare practice. This area is often left unfocussed in their curriculum.

The current study showed that the knowledge of the budding healthcare professionals was low due to not covering financial education in their curriculum. Russell K and Stramoski S, 2011 conducted a survey among the dental hygienists through closed-ended questionnaire which included six parts with 40 questions address the following topics like current financial status,

there was a significant difference in the knowledge of participants before and after the seminar on financial literacy among both the age (p-value <0.001).

[Table/Fig-5] describes the difference in mean score and standard deviation of financial literacy pre and post the seminar amongst interns and Postgraduates of Dentistry. Here, the result shows that there was significant difference in the knowledge of participants before and after the seminar on financial literacy among both the category (p-value <0.001).

Part I: Knowledge before and after the seminar on financial literacy in interns of dental colleges				
Financial planning	Mean±SD	Mean difference	t-value	p-value
Banking related knowledge				
Pretest (269)	16.90±4.03	-9.62	-30.98	<0.001
Post-test (269)	26.51±3.68			
Alternate banking knowledge				
Pretest (269)	1.96±1.48	-3.38	-26.49	<0.001
Post-test (269)	5.34±1.35			
Investment knowledge				
Pretest (269)	10.99±4.83	-10.28	-29.49	<0.001
Post-test (269)	21.27±2.74			
Income and expenditure knowledge				
Pretest (269)	2.93±1.61	-1.96	-16.32	<0.001
Post-test (269)	4.88±1.26			

savings and debt, financial goals and beliefs, workplace benefits, retirement mindset and characteristics of survey respondents [10]. The result of the study showed that the hygienists had ability to provide secure financial futures for themselves, still most of the respondents showed interest in receiving education about basics of finance through the dental hygiene curriculum and continuing education courses.

Swamy MB and Priya R, 2017 [11] found that the postgraduate management students in Andhra Pradesh whose level of financial literacy was low amongst the students of Finance, Marketing and HR, while level of financial literacy was high amongst the accounting students [11]. Chen H and Volpe RP, 1998 [6] conducted a survey on the awareness of financial related topics amongst the students, which has been found to be below average. Thus, a planned intervention to increase the young minds' awareness about proper management of personal finance well integrated into their curriculum would result in well managed finance by the budding professionals.

Limitation(s)

The study was limited to dental interns and postgraduates and could not be extended to other students, faculty and clinicians. The study was restricted to dental colleges in central Gujarat.

CONCLUSION(S)

The study reveals a high level of financial literacy amongst the respondents after the 90 minutes seminar. The knowledge of the respondents improved after participation in the seminar. This study shows that it is possible to improve the financial literacy of interns and postgraduate students of dentistry in order to prepare them for the financial demands of the future. To accomplish this, financial management needs to be integrated into their curriculum as an important step to ensure future financial success of today's budding healthcare professionals.

Future research may be conducted on the same topic with different interventions to check for the effectiveness and then, a well-planned

integrated intervention in the form of module may be introduced into the curriculum of healthcare professionals which would enable them to manage their personal finance.

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