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The Level of Financial Literacy: A Women Perspective

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ABSTRACT

The performance of women is greatly influenced by their level of financial literacy because women do not confine only to their household exercises, but they gradually participate in labour markets, household financial management and many more. This study, thus, aims to measure the level of financial literacy among women. To accomplish this objective, the data were collected from 130 respondents through a well-designed questionnaire. Principle component analysis was applied to check the data validity. Reliability of the data was checked through Cronbach alpha. The study established an indicator to measure the level of financial literacy. Findings depict a low level of financial literacy among working women. The findings show that imperative policies should be developed to minimize the problem of financial literacy among women. The study suggests making more efforts to reach women. The study recommends developing and promoting educational programs to boost financial literacy among women as well as in whole society. The organizations should conduct special workshops for women employees about the financial literacy to improve their performance.

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1. Introduction

The concept of financial literacy (FL) was firstly advocated by JumpStart Coalitio in such a way that it is the capability to use knowledge and skills for managing the financial belongings adequately so that we can secure our finances for the lifetime. FL is a merger of awareness, skills, behavior and attitudes that has been desired to achieve financial wellbeing, to take financial decisions and the understanding level of an individual about the initial concepts. It is also referred to as the management of personal finance (Remund, 2010). Regular financial decisions of individuals are based on the level of their FL that in turn has considerable effects on society (Gerardi et al., 2010). Due to the lack of FL, people make poor financial decisions. For example, we do not save enough for retirement, we spend extravagantly (Sotiropoulos and d'Astous, 2013), we do not pay bills on time and sometimes we buy things of our discomfort (Abendroth and Diehl, 2006). Therefore, governments want to improve FL by providing learning prospects at diverse levels of education (Ouachani et al. 2020).

Literature illustrates that FL is affected by different socio-economic and demographic factors (Bucher-Koenen et al., 2017). However, when comparison is made between genders, the result of prior studies (Ouachani et al. 2020; Mottola, 2013; Agarwalla et al., 2015) demonstrate that women have lower level of FL as compared to men and they are facing difficulty in taking pledged financial decision because of having lower financial knowledge

(Bucher-Koenen et al., 2017). According to Potrich et al. (2018), previous studies did not use finest tools to measure level of FL. Therefore, they developed new method by combining main aspects of FL named as financial knowledge (FK), financial attitude (FA) and financial behavior (FB). They found that the FL level of men is higher than women.

The performance of women is greatly influenced by their level of FL because now a day women do not confine only to their household exercises, but they gradually participate in labor markets, household financial management and many more (Potrich et al., 2018). According to the IBGE count from 2000-2010, there is an increase from 22.2% to 37.3% in the number of families in which women are the heads of the household instead of men and there is decrease from 95.3% to 92.2% in the number of families in which men are responsible to earn for their family. So, unlike the previous studies the purpose of present study is to analyze the level of financial literacy among women in Pakistan. Present study uses three focal dimensions of financial literacy (financial attitude, financial knowledge and financial behavior), prescribed by Potrich et al. (2015).

Financial knowledge is a type of human capital which is collected by learning from those arguments which influence the competence to adequately maintain revenues, expenses and savings all over the life (Hauff et al., 2020). Financial behavior is a crucial and most important dimension of FL. Positive outcomes of FL are directed by the behavior like planning of financial security and budget planning (Ouachani et al. 2020). Financial attitudes are the determinant of personal decision-making process and it is settled over economic and non-economic believes of decision makers (Ajzen, 2020). This study devotes to the literature in such a way that no study was found in Pakistan that examined the level of FL among women employees.

Previous studies indicate that FL is affected by many factors like socio-economic and demographic factors (Bucher-Koenen et al., 2017). Many studies were found on the FL even on the confined sample that how the FL varied with their demographic profiles. But no study was found that had used the confined sample of female to analyze FL. Hence, present study contributes to the existing debate by analyzing the level of FL among working women. The remaining paper has following structure: section 2 briefly reviews some important studies of FL. Conceptual model of the study along with the development of hypothesis is also presented in this section. Section 3 elucidates some important details about the data collection and methodology. Empirical results of the study are reported in section 4 while section 5 concludes the study.

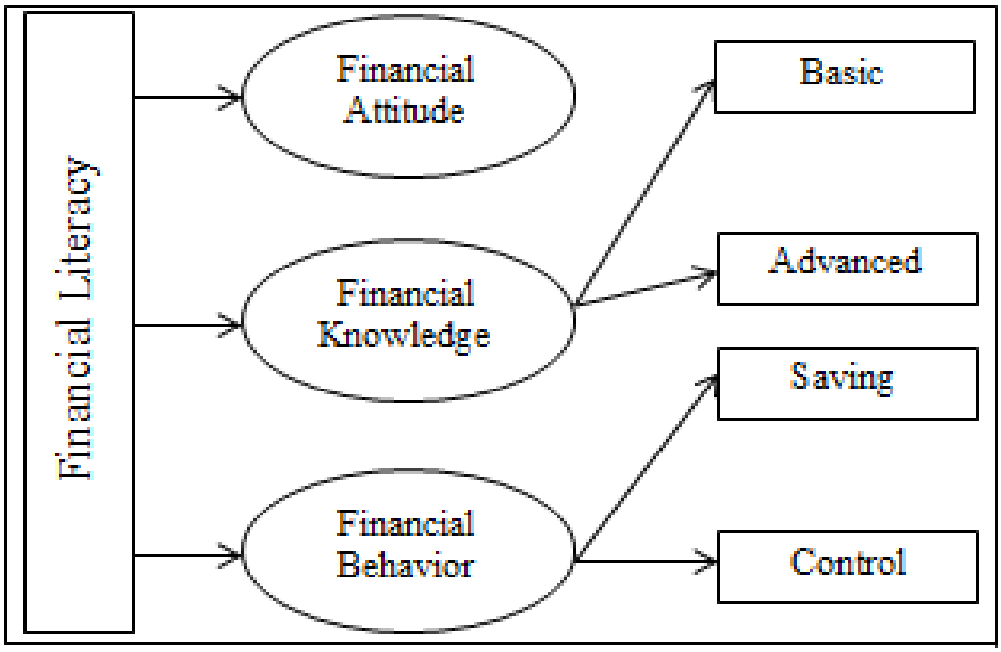
2. LITERATURE REVIEW

Potrich et al., (2018) establish an indicator to figure out the gender diversity in FL in Barazil by collecting primary data through a survey of 2485 individuals. Their results indicated that there is significant relation between FL and gender but the FL level of men was high as compare to women. They suggested that, women who have lower income and the level of education can achieve FL through greater efforts. Arifin and Siswanto (2017) evaluated the consequence of financial knowledge, financial confidence and income, on financial behavior by using the sample of working people of Jakarta Special Region whose monthly income was fixed by the theory of planned behavior (TPB) and finance behavior. They showed that financial knowledge and confidence can alter the financial behavior but income cannot.

Stromback (2017) analyzed psychological characteristics that influenced positive financial wellbeing and behavior of 2063 individual of Swedish population by conducting a survey. He showed that those people who have good self-control have better general financial behavior and therefore they sense more defended in their ongoing and forthcoming financial position and on the other hand sense lesser afraid about financial matters. Parrotta and Johnson (1998) investigated financial attitude and financial knowledge's impact on the financial satisfaction and management through financial standings by using the sample of 194 newly married individuals and found that they have high income and their attitude about finances was positive, but the relationship between attitudes and income was not strong by the financial knowledge. Furthermore, financial satisfaction was positively influenced by financial standings.

Fonseca et al (2012) investigated the possible clarifications of gender gap in FL by using the data of American life panel and found that the financial decision making or the FL level was positively influenced by the education level of an individual. After reviewing the above literature, present study postulates that:

H_1: Financial literacy level in women is low.



3. Conceptual Framework

Figure 1: Conceptual Framework

Figure 1 shows the conceptual framework of study, for measuring the level of FL among working women, we have used three main dimensions of FL for calculating the level of FL among women. Two dimensions of FL (financial behavior and financial knowledge) are further divided into two categories; control and saving financial behavior and basic and advanced financial knowledge.

3. DATA AND METHODOLOGY

3.1. Data and sampling

The population of this research is women employees of different branches of Habib Bank Limited (HBL) in Lahore, City of Pakistan. The study measures the level of FL among working women. Thus, 130 questionnaires were filled by the women employees of HBL. Multiple choice questionnaires were used to analyze the profile of participants and to measure their level of FL. The survey was accomplished by Likert-type-5 (strongly agree to strongly disagree) for measuring financial attitude and behavior. On the other hand, we use multispectral measure which consists of three formulates (financial behavior, attitude and knowledge) for measuring the level of FL, followed by Potrich et al. (2015).

This study adopted the questionnaire from Potrich et al. (2018). The first part of instrument comprised of demographic information. The second section of questionnaire contained 15 questions, which measured financial attitude using Likert-type 5-point questions and intends to determine self-evaluation of an individual about financial management. The third section of questionnaire entailed 13 questions which analyzed the financial behavior of the respondents by categorizing behavior into 2 sections (control financial behavior which comprised of 5 questions and saving financial behavior which contained 8 questions). The fourth part of questionnaire comprised of 10 questions which analyzed the level of financial knowledge by categorizing this knowledge into 2 sections (basic financial knowledge and advanced financial knowledge which contained 5 questions each).

The arrangement of questions among basic and advanced knowledge was encouraged by Van Rooij et al. (2011) who also took attention on the complication level of questions, so every question was nominated a weightage of 0.5 for the right answer from the section of financial knowledge and its index ranges from 0-5. If a responded did mistake in all questions, then the score will be 0. Inversely, if the respondent answered all the questions accurately then the score will be 5. Conceding to this score, those respondents having lesser lever of financial knowledge who scores below 60% whereas those respondents who scored between 60%-79% they are having medium level of financial knowledge and those respondents who scored more than 80% their level of financial knowledge is high (Ramos-Hernández, et al., 2020). Similarly, FL is measured by using financial attitude (having 15 questions), financial behavior (having 13 questions) and financial knowledge (having 10 questions). Moreover, to legitimize the extent, study used the methodology that is based on Churchill (1979) model, as it is most appropriate for complications and explanation regarding acceptance of the expected theoretical model.

This study applies principal component analysis (PCA) to examine the data' validity. Invalid items were excluded from the data. Reliability of data was check through Cronbach alpha. Finally, a financial indicator was developed to measure the financial literacy level of women employees.

4. RESULTS

4.1. Reliability and Internal Consistency

Table 1 shows the values of Cronbach's alpha to check the reliability of measures. The Cronbach's alpha scores vary from 0.759 to 0.847 indicating that the constructs retain reliability. According to Hinton et al. (2004), if the value of Cronbach's alpha is 0.90 or above then excellent reliability exists, if the value is in between 0.70-0.90 then high reliability existing, moderate reliability occurs when the value is in between 0.50-0.70. And if the value is 0.5 (or less), it shows that there is low reliability in data. Results of Table 1 show that the data of financial attitude (alpha = 0.759), control financial behavior (alpha = 0.773), and saving financial behavior (alpha = 0.847) are highly reliable. One cannot compute the value of Cronbach's alpha for remaining two variables; basic financial knowledge and advance financial knowledge as these are nominal variables, and the Cronbach's alpha is not an appropriate measure to check the reliability and internal consistency for the nominal data.

Table 1
Reliability of Measurements

Constructs	Valid N	No. of Items	Cronbach's Alpha
Financial attitude (FA)	119	15	0.759
Control financial behavior (FBC)	130	5	0.773
Saving financial behavior (FBS)	125	8	0.847
Basic financial knowledge (FKB)	126	5	-
Advanced financial knowledge (FKA)	123	5	-

4.2. Data Validity

In order to confirm the validity of data, factor analysis is conducted by using principle component analysis (PCA). But there are some pre-assumptions to reduce the data through PCA. These pre-assumptions are; the value of KMO should exceed 0.6 and the level of significance of Bartlett test should be less than 0.05. When these assumptions are fulfilled, then PCA reduces the data through factor rotation method and we get different Eigen values. Those construct, having more than 1 Eigen values are referred as principle components. However, if we have only 1 Eigen value that exceeds 1 then we have only one principle component which means that all the values are loaded into a single component. Contrarily, if more than one Eigen values exceed 1 then we have more than 1 principle components which means that all the values are loaded in more than 1 component. In this case we have two values that are loading values and cross loading values. The greatest value from all the components will be our loading value and the smaller value from posited components will be our cross loading value. According to Straub et al. (2004), the loading values should exceed 0.4 and cross loading values should be less than 0.4 to satisfy the condition of validity. When only 1 Eigen value exceeds 1 then we check the convergent validity whereas when more than one Eigen values exceed 1 then we check discriminate validity. Table 2 shows the presumptions of PCA, the value of KMO for all components exceeds 0.60 and the level of significance of Bartlett's Test of Sphericity is less than 0.05, so the study can go for further analysis. Those components of a construct considered to be a principle component that have an Eigen value more than 1.

Table 2
KMO and Bartlett Test of Sphericity

Constructs	No. of Items	KMO	Bartlett's Significance
Financial attitude (FA)	15	0.8024	0.000
Control financial behavior (FBC)	5	0.8767	0.000
Saving financial behavior (FBS)	8	0.8431	0.000

Table 3 shows the Eigen value of each component, and total variance that is explained by each Eigen value. Four components are extracted from one construct (Financial attitude) of financial literacy. Whereas 2 components are extracted from the 2 constructs (Control Financial behavior and saving financial behavior). And wo do not apply this analysis on remaining 2 constructs (basic financial knowledge and advanced financial knowledge) as they are nominal variables.

Table 3
Eigen Values and Total Variance Explained

Constructs	Components	Eigen Values
Financial attitude (FA)	Comp 1	5.247
	Comp 2	2.448
	Comp 3	1.246
	Comp 4	1.063
Control financial behavior (FBC)	Comp 1	2.573
	Comp 2	1.251
Saving financial behavior (FBS)	Comp 1	3.944
	Comp 2	1.165

Table 4 shows the discriminate validity of the data as it is very important for the analysis because invalid data leads towards invalid results. As in our case more than one Eigen values exceeds 1, so we will check discriminate validity. Furthermore, the validity analysis can be applied on only scale values not on nominal variables.

Table 4 shows that, from our all constructs (financial attitude, control financial behavior, saving financial behavior, basic financial knowledge, and advanced financial knowledge) all the related items of financial attitude are loaded on 4 components, and all the

values that are loaded in component 1 are 0.762, 0.846, 0.845, 0.632, 0.769 and 0.751 and the values that are loaded on component 2 are 0.366, 0.234, 0.379, and 0.384. Whereas, the values that are loaded on component 3 are 0.573, 0.380, 0.211, and 0.378 and the value that are loaded on component 4 are 0.845, and 0.390. So here we can say that some related items of financial attitude do not fulfill the criteria of discriminate validity (Straub et al., 2004), as in our case some related items of financial attitude are inadequate as their loading values do not exceeds 0.4. Therefore, we adopt a strategy of dropping variables to make our data reliable (Potrich et al., 2018). We exclude those items from the constructs that have loading value less than 0.4. Thus, there is presence of discriminate validity in our data after excluding inadequate variables.

On the other hand, all the related items of control financial behavior are loaded on 2 components, and all the values that are loaded in component 1 (0.762, 0.739, 0.750, 0.643), and on component 2 (0.541) exceeds 0.4 and all the cross loading values of these constructs are less than 0.4. So, the discriminate validity is also present in this construct. Similarly, all related items of saving financial behavior are also loaded on 2 components. All the values that are loaded in component 1 (0.799, 0.726, 0.783, 0.758, 0.784, 0.660) and component 2 (0.376, 0.346) do not exceed 0.4 but the cross loadings are less than 0.4. Therefore, after observing the values of each item of this construct, we exclude invalid items from the construct. There is presence of discriminate validity in our data after excluding inadequate variables. The above demonstrated results satisfy the criteria of discriminate validity and it is concluded that the collected data that are acquired from the instrument are valid.

Table 4
Discriminate Validity of Measurements

Items	Components			
	Component 1	**Component 2**	**Component 3**	**Component 4**
AQ1	**0.762**	-0.098	0.088	0.149
AQ2	**0.846**	-0.123	-0.060	0.144
AQ3	0.039	-0.104	-0.192	**0.845**
AQ4	**0.632**	-0.431	0.092	0.125
AQ5	**0.769**	-0.041	-0.145	0.006
AQ6	**0.751**	-0.055	-0.248	0.025
AQ7	0.213	-0.169	**0.573**	0.313
AQ8	0.250	0.050	-0.105	**0.390**
AQ9	0.152	0.013	**0.380**	-0.185
AQ10	-0.189	0.147	**0.211**	-0.023
AQ11	-0.431	0.304	**0.378**	0.216
AQ12	-0.213	**0.366**	0.419	-0.347
AQ13	-0.095	**0.234**	0.121	-0.263
AQ14	-0.157	**0.379**	0.084	0.155
AQ15	-0.041	**0.384**	0.342	0.076
BCQ16	**Component 1**	**Component 2**		
BCQ19	**0.762**	-0.537		
BCQ20	**0.739**	-0.595		
BCQ21	**0.750**	0.182		
BCQ23	0.342	**0.541**		
FBSQ17	**0.643**	0.351		
FBSQ18	**Component 1**	**Component 2**		
FBSQ22	0.324	**0.376**		
FBSQ24	**0.779**	0.215		
FBSQ25	**0.726**	0.085		
FBSQ26	0.367	**0.346**		
FBSQ27	**0.783**	-0.216		
FBSQ28	**0.758**	-0.206		
FKBQ29	**0.784**	-0.363		
FKBQ30	**0.660**	-0.349		

4.3. Development of Financial Literacy Index

After making sure that our data are valid, we use the developing indicator to analyze the financial literacy of the women employees that was introduced by Potrich et al. (2018) by

using the weights of factor loadings. Firstly, we assign weights to each item that has the minimum value of 0 and the maximum value of 5 of every construct. Secondly, we compute standardized measures of financial literacy by multiplying the weights of factor loading with each valid item of this construct so therefore we get 3 variables (each variable for each construct) that are standardized measure of financial literacy. Particularly, we multiply the factor loading weights with the specified answer of financial attitude for computing the standardize measure of financial literacy. We also multiply the weights of factor loading with the specified answer of control and saving financial behavior and then again multiply the weights of factor loading with control and saving financial behavior and get another standardize measure of financial literacy that is financial behavior. We repeat the same process and get another standardize measure of financial literacy that is financial knowledge. Thirdly, we developed weighted measures of financial literacy by using these 3 standardized measures. Finally, measure of financial literacy is developed by the individual's Quadratic Euclidean Distance.

4.4. Respondent's Profile and Descriptive Statistics

A total of 158 questionnaires were circulated to the women employees of Habib Bank Limited (HBL) in Lahore out of which 130 questionnaires with a high response rate of (82%). The demographic profile of respondents is given in Table 5 which shows the information of participants regarding their age, qualification and preferred language. Moreover, the descriptive statistics of survey items based on minimum, maximum and standard deviation values are shown in Table 6.

Table 5
Respondents' Demographics

Demographic	Particulars	Frequency
Gender	Female	130
Age	20-24	64
	25-34	50
	35-44	13
	45-54	03
	55-64	-
Qualification	Bachelor	41
	Masters	64
	M.Phil.	20
	Other	05
Language	English	48
	Urdu	82

Table 6
Descriptive Statistics of Survey Items

Items	N	Min	Max	Mean	SD	Items	N	Min	Max	Mean	SD
AQ1	130	2.00	5.00	4.1154	0.68917	FBCQ23	130	2.00	5.00	4.2538	0.62644
AQ2	130	2.00	5.00	4.0308	0.71461	FBCQ17	130	1.00	5.00	4.1923	0.77855
AQ3	130	2.00	5.00	4.0692	0.69537	FBCQ18	130	2.00	5.00	3.9385	0.72341
AQ4	130	2.00	5.00	4.0462	0.62085	FBCQ22	129	1.00	5.00	3.9535	0.75891
AQ5	130	2.00	5.00	4.0615	0.63189	FBCQ24	129	2.00	5.00	4.2171	0.68421
AQ6	128	2.00	5.00	4.0469	0.66237	FBCQ25	130	2.00	5.00	3.8923	0.73922
AQ7	128	2.00	5.00	3.9297	0.66621	FBCQ26	130	2.00	5.00	3.9154	0.82626
AQ8	130	2.00	5.00	3.7615	0.69107	FBC127	127	2.00	5.00	3.7480	0.86344
AQ9	129	1.00	5.00	2.2558	0.80311	FBCQ28	130	2.00	5.00	4.1231	0.80709
AQ10	129	1.00	4.00	2.2171	0.68421	FKBQ29	127	0.00	1.00	0.3465	0.47773
AQ11	130	1.00	4.00	2.0231	0.66432	FKBQ30	129	0.00	1.00	0.8605	0.34785
AQ12	129	1.00	4.00	2.0853	0.66180	FKBQ35	130	0.00	1.00	0.8462	0.36220
AQ13	129	1.00	4.00	2.0000	0.69597	FKBQ36	129	0.00	1.00	0.7209	0.45029
AQ14	130	1.00	5.00	1.8538	0.68326	FKBQ37	130	0.00	1.00	0.9846	0.12355
AQ15	126	1.00	5.00	1.9762	0.73173	FKAQ31	127	0.00	1.00	0.3386	0.47510
BCQ16	130	1.00	5.00	3.5077	1.01345	FKAQ32	125	0.00	1.00	0.3600	0.48193
BCQ19	130	1.00	5.00	3.6385	0.98046	FKAQ33	128	0.00	1.00	0.9063	0.29263
BCQ20	130	2.00	5.00	3.9308	0.75932	FKAQ34	129	0.00	1.00	0.8682	0.33957
BCQ21	130	2.00	5.00	4.1846	0.67954	FKAQ38	129	0.00	1.00	0.9380	0.24212

4.5. Level of Financial Literacy

The indicator of financial literacy is developed in four steps (Table 7). First step is to assign codes to the valid items of each construct. Financial attitude has 7 valid questions: FAQ1, FAQ2, FAQ3, FAQ4, FAQ5, FAQ6, FAQ7. Financial behavior has 11 valid questions: FBQ16, FBQ19, FBQ20, FBQ21, FBQ23, FBQ18, FBQ22, FBQ25, FBQ26, FBQ27, FBQ28. Financial attitude has 10 questions which include right or wrong responses of respondent, so the value are assigned to these questions in such a way that it takes value of 1 for right response and 0 otherwise.

Second step is to develop the standardized measures of financial literacy by using the weights of factor loadings. So we obtained the weights of factor loading for each construct and then multiply these weights with the respective answer of each construct. Standardize measure of Financial attitude is developed by using the weighted sum of [0.125*FAQ1 + 0.148*FAQ2 + 0.157*FAQ3 + 0.154*FAQ4 +0.149*FAQ5 + 0.150*FAQ6 + 0.117*FAQ7], known as ATTIT. For Standardize measure of financial behavior, firstly we develop the standardize measures by using the weighted sums of control [0.177*FBCQ16 + 0.242*FBCQ19 + 0.197*FBCQ20 + 0.173*FBCQ21 + 0.211*FBCQ23] and saving [0.176*FBSQ18 + 0.173*FBSQ22 + 0.172*FBSQ25 +0.155*FBSQ26 + 0.156*FBSQ27 + 0.169*FBSQ28] financial behavior as we divided the section of financial behavior into 2 categories, after that, financial behavior is developed by using the weighted sum: [0.541*CONTROL +0.459*SAVINGS] known as BEHAV. For Standardize measure of financial knowledge, firstly we develop the standardize measures by using the weighted sums of basic [FKBQ29 + FKBQ30 + FKBQ35 + FKBQ36 + FKBQ37] and advanced [FKAQ31 + FKAQ32 + FKAQ33 + FKAQ34 + FKAQ38] financial knowledge because we divided the section of financial knowledge into 2 categories, after that, financial knowledge is developed by using the weight sum of [0.506*BASIC + 0.494*ADVANCED] known as KNOW.

Third step is to develop the weighted measures of financial literacy by using the standardized measures that we developed in step 2, the weighted measures are developed by multiplying ATTIT, BEHAV and KNOW respectively with 0.337; 0.424 and 0.238. After developing the weighted measures of financial literacy, our fourth and the final step is to define the financial literacy level of the respondents, therefore we used individual's quadratic Euclidean for defining the level of financial literacy (high or low) of the working women. This individual's quadratic Euclidean consist of 2 equations known as D_0 and D_1:

$$"D_0 = (1.384 - wATTIT)^2 + (1.344 - wBEHAV)^2 + (0.496 - wKNOW)^2"$$
$$"D_1 = (1.458 - wATTIT)^2 + (1.756 - wBEHAV)^2 + (0.922 - wKNOW)^2"$$

Moreover, our decision about the financial literacy level of women employees depends on these 2 equations, If the value of D_0 is greater than D_1 then we will conclude that women employees have high level of financial literacy, whereas if D_0 is less than D_1 then we will conclude that women employees have lesser lever of financial literacy. Finally, when the results are inserted in equation 1 (D_0) and 2 (D_1), we find that D_0 is less than D_1 ($D_0<D_1$), so we conclude that the women employees have lower level of financial literacy because the value of D_0 is smaller than D_1. Table 7 shows step by step methodology for calculating the level of financial literacy among women.

Table 7
Measuring the Level of Financial Literacy

Step 1: With the answers of respondents to the questions marked in the bold is financial literacy questions, the variables are coded as: **FINANCIAL ATTITUDE –** FAQ1, FAQ2, FAQ3, AFQ4, FAQ5, FAQ6 and FAQ7 (Likert scale-5). **FINANCIAL BEHAVIOUR –** FBQ16, FBQ18, FBQ19, FBQ20, FBQ21, FBQ22, FBQ23, FBQ25, FBQ26, FBQ27, and FBQ28 (Likert scale-5). **FINANCIAL KNOWLEDGE –** FKQ29 to FKQ38 (right or wrong questions).
Step 2: Development of standardized measure of financial literacy: **FINANCIAL ATTITUDE =ATTIT =** [0.125*FAQ1 + 0.148*FAQ2 + 0.157*FAQ3 + 0.154*FAQ4 +0.149*FAQ5 + 0.150*FAQ6 + 0.117*FAQ7] **FINANCIAL BEHAVIOUR = FB** **Control Financial Behavior = FBC=** [0.177*FBCQ16 + 0.242*FBCQ19 + 0.197*FBCQ20 +

0.173*FBCQ21 + 0.211*FBCQ23] **Savings Financial Behavior = FBS =** [0.176*FBSQ18 + 0.173*FBSQ22 + 0.172*FBSQ25 +0.155*FBSQ26 + 0.156*FBSQ27 + 0.169*FBSQ28]
BEHAV = [0.541*FBC+0.459*FBS]
FINANCIAL KNOWLEDGE = FK **Basic Financial Knowledge = FKB =** [FKBQ29 + FKBQ30 + FKBQ35 + FKBQ36 + FKBQ37] **Advanced Financial Knowledge = FKA =** [FKAQ31 + FKAQ32 + FKAQ33 + FKAQ34 + Q38]
KNOW = [0.506*FKB+ 0.494*FKA]
Step 3: Development of weighted measure of financial literacy: **wATTIT =** 0.337*ATTIT **wBEHAV =** 0.424*BEHAV **wKNOW =** 0.238*KNOW **Step 4:** Enter the results in the formulas:
$D_0 = (1.384 - wATTIT)^2 + (1.344 - wBEHAV)^2 + (0.496 - wKNOW)^2$ $D_1 = (1.458 - wATTIT)^2 + (1.756 - wBEHAV)^2 + (0.922 - wKNOW)^2$
Step 5: Analysis and decision criteria: "If $D_0 > D_1 \rightarrow$ the female is considered to have HIGH level of financial literacy" "If $D_0 < D_1 \rightarrow$ the female is considered to have LOW level of financial literacy" **Result:** as $D_0 < D_1$, the working women have low level of financial literacy in Pakistan.

5. CONCLUSION

FL is a merger of awareness, knowledge, skill, attitude and behavior that has been desired to achieve financial wellbeing and to take financial decision and financial management, financial attitude, financial behavior has been affected by FL. According to Moore (2003), when an individual has better financial knowledge, positive financial behavior and exceptional financial attitude then his/her financial management improves. Moreover, financial performance of women is also affected due to FL because those individuals facing difficulty in financial opinion building have lesser lever of FL which in turn effects their performance (Calamato, 2010). The aim of this study is to measure the level of FL among working women because now a day women do not confine only to their household exercises but they gradually participate in labor markets, household financial management and many more (Potrich et al., 2018).

The data were collected from 130 respondents through well designed questionnaires. PCA was applied to check the data validity and invalid items were excluded. Reliability of data was checked through Cronbach alpha. Moreover, we developed a model of FL that is reinforced by different researchers (Moore, 2003; Potrich et al., 2018) to find out the literacy level of women and found that women have lesser lever of financial literacy and therefore their performance affected. Our results are consistent with other studies (Ouachani et al. 2020; Mottola, 2013; Agarwalla et al., 2015, Potrich et al., 2018, Fonseca et al, 2012).

The findings imply that operative policies should be developed in Pakistan to minimize the problem of FL among women. The course of financial management should be introduced for all the undergraduate disciplines so the students may get awareness about the financial literacy. The organizations should start workshops for their women employees about the financial literacy for improving their performance. This study also has some limitations. This is country specific study and is based on selective population. We do not know the exact number of women employees, so we do not use random sampling method in this study, instead we adopt a formula for choosing the sample size. Thus, a large sample can be used from other population using random sampling to get more fine results.

6. References

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