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DETERMINANTS OF FINANCIAL WELLNESS OF RURAL HOUSEHOLDS IN THE HILL DISTRICTS OF UTTARAKHAND: AN EMPIRICAL APPROACH

Ajay Purohit
Research Scholar
School of Management
IMS UNISON University, Dehradun, Uttarakhand, India
E-mail: ajaypurohit_in@hotmail.com
https://orcid.org/0000-0001-9369-6083

Dr. Gaurav Chopra
Assistant Professor
School of Management
IMS UNISON University, Dehradun, Uttarakhand, India
E-mail: gauravschopra19@gmail.com
https://orcid.org/0000-0002-1238-6831

Dr. Parshuram G Dangwal
Associate Professor
School of Management
IMS UNISON University, Dehradun, Uttarakhand, India
E-mail: pgdangwal@gmail.com
https://orcid.org/0000-0002-9504-1344

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ABSTRACT

The study examines significant contributors to financial wellness for rural households in the hill districts of Uttarakhand. The study takes a sample of 666 respondents through multi-stage stratified random sampling from Self-Help Groups (SHGs) and Cooperatives members, and all are small and marginal farmers. A field survey was conducted using a structured questionnaire. Except for financial knowledge and numeracy, all other constructs, such as cash management, savings behavior, risk-credit management, financial attitudes, and financial wellness, were measured on a seven-point Likert scale ranging from strongly disagree to strongly agree. Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM) were conducted on 628 valid samples using SPSS 23 and AMOS 23. The results from the analysis revealed that cash management, savings behavior, and financial attitudes significantly contribute to financial wellness. The study found that households have the reasonable financial knowledge and financial numeracy skills. The study also found that savings behavior has a mediating effect on the relationship between cash management and financial wellness. The study is useful for rural development stakeholders and policymakers to strategically focus on financial inclusion programs.

Keywords: Financial Wellness, Financial Behavior, Financial Literacy, Financial Inclusion, Rural, Self-Help Groups.

JEL Classification Codes: D14, G51, G52, G53, I30.

INTRODUCTION

Financial wellness or financial well-being or economic well-being or financial satisfaction denotes financial situation or financial health. It is a multidimensional aspect and objective as well as subjective concept in nature (Vieira et al., 2021), (Iramani & Lutfi, 2021), (Tanoto & Evelyn, 2019), (Brüggen et al., 2017). Financial inclusion, financial behavior, financial attitude, financial literacy are other terminologies associated with financial wellness in multiple studies. Financially well households easily meet the current needs and deal with sudden needs of an individual or a household (Vieira et al., 2021), (Masenya & Dickason-Koekemoer, 2020), (Michael Collins & Urban, 2020), (Simonova, 2019), (CFPB, 2017), (CFPB, 2015). Holistically, financial wellness is directly and indirectly connected to economic upliftment and an essential growth driver to achieve sustainable development goals (Wadhwa, 2020), (Rickard & Johnsson, 2018), (Klapper et al., 2016), (UNCTAD, 2015). Factors like demographic aspects (gender, education, etc.), income, savings, opportunities, accessibility, the package of practices, urban, rural, and others impact financial wellness.

In the rural hilly areas, due to distinct geographical scenarios, situations are different from the plains. The plain area has more opportunities than the hills; therefore, high-income inequalities are reflected in plain and rural areas (Suryanarayana & Mamgain, 2017), (Mamgain & Reddy, 2015). Around 86% of geographical areas are under hilly terrain in the state, and 71.05% are covered under forest. 70.37% of the state population lives in rural areas and is primarily engaged in agriculture and allied activities (DES, 2020). Horticulture and agriculture are identified as growth drivers of the state economy in the state vision 2030 (GoUK, 2018). However, income from agriculture and allied activities is not significantly high at the individual household's level because of less volume, high marketing cost, and other distinguishing factors of hills (Kandpal & Kavidayal, 2020). For economic growth and sustainable livelihood, households have organized in the Self-Help Groups (SHGs) at the village level and into Cooperatives at the cluster level. The present study has been conducted with SHGs members from the hill districts of Uttarakhand. All members are small and marginal farmers (Note 1).

State Rural Livelihood Mission (SRLM) and Integrated Livelihood Support Project (ILSP) are two main programs being executed in Uttarakhand. SRLM promotes women's SHGs exclusively (RBI, 2019), whereas ILSP has more than 85% of women members in their groups (CPCU, 2020). SHGs followed the core concepts of 'Panchasutras' (Note 2) for cohesiveness, sustainability, and mitigating financial constraints in tough times. Under financial inclusion, they provide training and facilitate financial instruments e.g., accounts, investment, insurance e.g., PM Jeevan Jyoti Bima Yojana, PM Suraksha Bima Yojana, credit schemes e.g., Kisan Credit Card, Mudra loan, etc. (CPCU, 2020).

The main objective of this study is to identify the significant factors behind financial wellness in the context of rural households in the hill districts of Uttarakhand. All households are members of SHGs, and Cooperatives and also come small and marginal farmers. To identify the construct, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) have been used. Further, structure equation model (SEM), and path analysis have been used to find the mediating role of savings behavior, and results are presented.

LITERATURE REVIEW

Financial Wellness

Based on previous studies (Botha & New, 2021), (OECD, 2020), (Mahdzan et al., 2020), (Heath et al., 2018), (Predergast et al., 2018), (CFPB, 2017), (CFPB, 2015) financial wellness refers to household's (i) financial health (like income, savings) to fulfill daily and emergency requirements in current as well as future, (ii) financial security and financial freedom in the life course, and (iii) ability of effective financial management. (Masenya & Dickason-Koekemoer, 2020), (Heo et al., 2020) study revealed that financial wellness positively correlates with satisfaction with life, whereas life satisfaction refers to an

individual's satisfaction towards happiness and subjective well-being. In a nutshell, financial wellness is a reflection of fulfilling the household's financial necessities, enhancement of economic status, better living conditions, cost-effective package of financial practices and perception of satisfaction.

According to (PwC, 2020), (PwC, 2014) employee financial wellness survey, financial wellness is significantly correlated with financial literacy for decision-making and financial behavior towards savings, investments, credit, and others. Multiple reports and research (Botha & New, 2021), (OECD, 2020), (Heath et al., 2018), (Gautam & Andersen, 2016) (Brüggen et al., 2017), (CFPB, 2017), (Coşkuner, 2016), (CFPB, 2015) examined financial wellness with multiple corresponding constructs - financial behavior, financial attitude, financial knowledge, financial solvency, income, education, and individual characteristics.

Financial Behaviors

Financial behavior is a kind of behavior that influences taking a correct financial decision about cash, credit, risk, and savings (IGI-Global, 2021b), (Iramani & Lutfi, 2021), (Zulaihati & Widyastuti, 2020). Financial behavior is a direct and indirect influencer of financial wellness and is associated with financial literacy, income, gender, marital status, homeownership, education, to name a few. Innovative practices of cash and savings reduce the consequences of any emergency or mishap. The financial behavior of rural households is significantly correlated with financial literacy and savings (Murari, 2019). Therefore, financial behaviors can be measured through one's practice and perception, including cash management in day-to-day life, savings for the future, risk, and credit management to reduce the debt and mitigate the financial losses.

Cash Management

Cash management is maintaining cash in hands and effectively utilizing income so that the person can be inclined towards achieving future goals while fulfilling the present needs and realizing future needs. Every household prepares a tentative plan or budget for recurring expenses and other investment purposes (Widyastuti et al., 2020), (Murari, 2019). Cash management is a practice of allocation and distribution of income for day to day expenses, savings for futuristic goals, and assets creation which has a significant impact on financial wellness (Adiputra, 2021), (Fazli Sabri et al., 2020), (Wahab & Yaacob, 2018), (Ameliawati & Setiyani, 2018). Thus, from the pioneering studies, the following hypothesis has been formulated:

H_1: Cash management has a significant impact on financial wellness.

Savings Behaviour

It is natural to set aside a portion of one's earnings for future aspirations and emergencies. Sufficient savings reduces unexpected social and financial shocks (Despard et al., 2020), (Gaisina & Kaidarova, 2017). Banks and Post Offices are common financial institutions for savings. SHG members also save regularly in their respective groups. Generally, it is small in terms of amount, but regular as decided in the group like weekly or monthly. Group savings have been utilized for specific and prominent needs (DAY-NRLM, 2017). Households also save their cash at home and deposit savings with friends, family members, moneylenders (Coleman & Wynne-williams, 2006). Several researchers (Gaisina & Kaidarova, 2017), (Nguyen et al., 2017), (Lee & Hanna, 2015) examined saving behavior and revealed that it has a significant influence on financial wellness. Therefore, based on literature support, we found savings are self-actualization of financial wellness. Thus, from the literature, the following hypothesis has been formulated:

H_2: Savings behavior has a significant impact on financial wellness.

Risk and Credit Management

Risk management is conceptualized to reduce the impact of any jolt from any risk in life, health, assets, crops, livestock, and others. (Robb & Woodyard, 2011) identified risk and credit management are best

financial practices. Unexpected financial risk is reduced through insurances and increased savings (Murugesan & Manohar, 2020), (Woodyard, 2013), and (OECD, 2013). Insurance is a one-time or regular investment; however, it requires income, accessibility, and financial literacy. Low-income households face different risks and shocks e.g., income volatility, livelihood risks, health, weather (Vishwanath et al., 2020). They can't afford insurance (Rampini & Viswanathan, 2016). However, the government is promoting credit cum insurance schemes, which are affordable to low-income households. As per need, rural households take loans from SHG at a nominal interest rate, which is extremely low compared to other sources. Still, households avoid taking loans except in emergencies. Overall, high credit, unforeseen risk affect savings, increase stress, and impact financial wellness. Based on the literature, the following hypothesis has been formulated:

H_3: Risk-credit management has a significant impact on financial wellness.

Financial Literacy

"National Strategy for Financial Education 2020-2025" (RBI, 2021) indicates that "the achievement of Financial Literacy empowers the users to make sound financial decisions which result in financial well-being of the individual." According to (Chong et al., 2021), (Stella et al., 2020), (N. Ismail & Zaki, 2019), (OECD, 2018), (Topa et al., 2018), (Skagerlund et al., 2018), (Jayanthi & Rau, 2017), and (Bilal & Zulfiqar, 2016) financial literacy is one's perception and knowledge about financial resources, effective utilization of financial instruments and financial decision-making skills towards economic sustainability and improvement during one's life course. It is a set of skills influenced by knowledge, a package of practices, awareness, and practices in the community, accessibility of resources, education, income, and self-actualization. Definitions indicate that the two core elements of financial literacy are financial knowledge and financial attitude, and they complement each other.

Financial Knowledge

Previous research revealed a strong association among financial knowledge, financial behavior, and financial wellness (Adiputra, 2021), (Stella et al., 2020), (Choudhary & Kamboj, 2017), (Gaisina & Kaidarova, 2017), (Kamakia et al., 2017), and (Potrich et al., 2016). Financial knowledge helps to make profitable financial decisions, effective use of financial products and services, improve financial behaviors towards sustainable economic growth and happiness (Atmaningrum et al., 2021), (OECD, 2020), (Nguyen et al., 2017), (Aren & Aydemir, 2014). Training, capacity buildings, and exposures mainly in financial products and services increase financial knowledge. It is necessary for all to take a correct financial decision in terms of financial products and services that increase financial wellness (N. Ismail & Zaki, 2019), (Kamakia et al., 2017), (Phani Kumar, 2016), and (Muleke & Muriithi, 2013). (Zhan et al., 2006) assessed pre-post financial training of low-income population and suggested that financial literacy training significantly increases economic management practices that lead to financial wellness.

Financial Attitude

A financial attitude is a perception or tendency towards financial products and services (IGI-Global, 2021a). Financial attitude influences financial management, which impacts future wellness (RBI, 2021), (OECD/INFE, 2013). It means that a positive financial attitude towards budgeting, savings, and money has positive financial behavior. It varies from person to person, depending upon financial knowledge as well as demographic variables. Several researchers (Adiputra, 2021), (Abdullah et al., 2019), (Ameliawati & Setiyani, 2018), (Forouzani & Mohammadzadeh, 2018), (Garber & Koyama, 2017), explained the significant relationship between financial attitude and financial wellness. (Potrich et al., 2016) explained in their model that financial knowledge and financial attitude have positive impacts on financial wellness. Based on the literature review, the following hypothesis has been formulated:

H_4: Financial attitude has a significant impact on financial wellness.

Demographic Factors

Demographic cohorts like age, gender, education, income, family size, assets, and socio-economic status always influence financial wellness and its other contributors. (Collins & Urban, 2020) the study explained that age and income have a significant impact on financial wellness and relative variables. (Woodyard & Robb, 2012) examined gender and age-wise financial satisfaction and financial behavior. (Vosloo et al., 2014) study indicates that less income and less or lack of financial benefits, higher debt levels create financial stress, which impacts negatively on a person performance at work. (N. Ismail & Zaki, 2019) explained that factors like employment opportunities, income instability, family size, financial self-efficacy, and financial help-seeking behavior impact the financial wellness of the low-medium class. (Kesavan, 2020) recommended that the regular and multiple sources of income like agriculture, livestock, and community works support catalyze financial inclusion. Based on the literature review, demographic cohorts like gender, age, education, land size, income, and savings were included in the study.

Savings Behavior as a Mediator

The primary source of income is agriculture and allied activities in the rural areas. Revenue from these sources varies due to a number of factors like production, market, and weather. Hence, the income is irregular, and savings is one of the crucial sources in every situation for all households. (Lulaj et al., 2021), (Jin et al., 2021), (S. Ismail et al., 2018), (Shin & Kim, 2018), (Magendans et al., 2017) research indicated that savings play an important role in emergencies and significant contribution to financial wellness. (Gjertson, 2016) the study found that savings are a kind of insurance of low-income households which protects against hardship. (Iramani & Lutfi, 2021) explained that a household's savings and income are positively correlated with their financial wellness. (Wieliczko et al., 2020) highlighted in their study that savings as a growth driver of sustainable development of farmers and a core pillar of financial security. (Martin & Hill, 2015) establish financial situation- poverty-well-being relationship, and found savings is a core factor of well-being. Briefly, we can conclude that effective cash management and positive savings behavior increase savings, and subsequently, financial wellness. As such, we predict the following mediation hypotheses:

H_5: Savings behavior mediates the relationship between cash management and financial wellness.

RESEARCH METHODOLOGY

The primary objective was to identify the groups of factors that significantly explain financial wellness, especially in the context of rural households in hill districts of Uttarakhand. All are members of SHGs and Cooperatives and also come under small and marginal farmers. The study was conducted in the 21 hill blocks from hill districts of Uttarakhand through multi-stage stratified random sampling. Total 666 samples were collected from upper hills, middle hills, and foothills. The Survey method was used to collect the data with the help of a structured questionnaire. A structured questionnaire was used to gather data from the respondents. The questionnaire was developed through literature review and translated into the native language, "Hindi". To improve the questionnaire's accuracy, a pilot test on 70 respondents was conducted with rural households, and related modifications have been implemented. Then, a sample of 50 respondents, distinct from those included in the pilot test, were asked to pre-test the questionnaire. Other than the demographic cohort, the questionnaire consisted of 5 major sections, i.e., cash management, savings behavior, risk-credit management, financial knowledge, and financial attitude. All sections except financial knowledge were measured on a seven-point Likert scale ranging from strongly disagree to strongly agree. After data cleaning (missing values, outliers), 628 responses were analyzed using SPSS 23 and AMOS 23.

Table 1. Demographic features

Measure	Items	Frequency	%
Gender	Male	79	12.6
	Female	549	87.4
	Total	628	100.0
Education Qualification	Less than Eight Class	182	29.0
	Intermediate	300	47.8
	Graduate	92	14.6
	Postgraduate	54	8.6
	Total	628	100
Age	20 to 30	87	13.9
	30 to 40	273	43.5
	40 to 50	171	27.2
	50 to 60	80	12.7
	More than 60	17	2.7
	Total	628	100
Average Monthly Income (including all sources)	Less than INR 6000	247	39.0
	INR 6000 to INR 9000	189	30.1
	INR 9000 to INR 12000	89	14.2
	INR 12000 to INR 15000	49	7.8
	More than INR 15000	54	8.6
	Total	628	100
Average Monthly Savings (including all sources)	Less than INR 600	257	40.9
	INR 600 to INR 900	150	23.9
	INR 900 to INR 1200	80	12.7
	INR 1200 to INR 1500	54	8.6
	More than INR 1500	87	13.9
	Total	628	100
Land Size (in hectare)	Less than 0.04	100	15.9
	Between 0.04 to 0.08	146	23.2
	Between 0.08 to 0.120	155	24.7
	Between 0.120 to 0.160	118	18.8
	More than 0.160	109	17.4
	Total	628	100
Who is responsible for making major financial decisions (like investment, purchase, etc.) in your family?	Myself	127	20.2
	Wife / husband	144	22.9
	Both, after discussion	278	44.3
	Elder family Members	79	12.6
	Total	628	100

DATA ANALYSIS AND RESULTS

Demographic data Table-1 indicates 87.4% of respondents were female respondents. 76.8% have education qualification up to intermediate. 43.5% of the respondents were between the ages of 30 and 40. About 69.1% of the respondents had an average monthly income of less than INR 9000, and 64.8% had an average monthly saving of less than INR 900. Interestingly, the financial decision in 44.3% family is taken after discussion and mutual consent of husband and wife.

Table 2. Financial Knowledge

	Items	**Yes (%)**	**No (%)**
Financial Knowledge	FL1K1	79.6	20.4
	FL2K2	86.6	13.4
	FL2K3	93.2	6.8
	FL2K4	87.9	12.1
	FL2K5	78.3	21.7
	Items	**Correct Answer (%)**	**Incorrect Answer (%)**
Numerical Skills	FL2NS1	91.9	8.1
	FL2NS2	73.7	26.3
	FL2NS3	87.9	12.1
	FL2NS4	42.5	57.5

Table-2 indicates that 79.6% of respondents were aware that if they save their savings in Bank / Post office, they will get more benefits than other informal arrangements. Interestingly, 86.6% of respondents know about the interest rate of fixed deposits. 93.2% of respondents know about PM Jan Dhan Account, and 87.9% of respondents know the details of PM Kisan Samman Nidhi Scheme. The results indicate that respondents have good financial knowledge. It reflects the outcome of training, capacity-building programs, and other activities implemented under financial inclusion by different institutions (RBI, 2021), (Wadhwa, 2020).

91.9% of respondents correctly calculated day-to-day financial calculations. 73.7% of respondents correctly calculated group savings. The results indicate that the members of informal savings groups actively participate in the group meetings. 87.9% of respondents can calculate dividends, which indicates that all shareholders know how dividends are calculated. However, only 42.5% of respondents correctly calculated simple interest, and 52.4% gave mathematically wrong answers. Overall, the study shows that the rural households in the hill districts have financial knowledge.

Reliability Test

The quality and consistency of the survey were further assessed using Cronbach's alpha (.820) which is greater than .7, hence acceptable (George & Mallery, 2016).

Table 3. Reliability statistics

Cronbach's Alpha	**N of Items**
0.820	19

Exploratory Factor Analysis

EFA has been conducted for dimension reduction through varimax, principal component analysis, and rotated component matrix. Total 19 items with a sample of 628 were used for analysis. Five factors were extracted through eigenvalue (>1) and scree test (Figure 1) with the significant (> 0.40) loadings (Hair, Sarstedt, et al., 2017). Table-4 states that all assumptions of EFA are met. All the items have been loaded appropriately in the factor analysis (Table-5) and have passed the reliability test. Three items have been grouped into financial wellness, four items in cash management, three items in attitude towards savings, five items in credit-risk management, and four items in financial attitude.

Table 4. Assumptions for EFA

	Conditions	**Reference (Chopra et al., 2019)**
Sample size is 628	n > 200	(Kyriazos, 2018)
Barlett's test of sphericity is significant	p < 0.001	(Watkins, 2018)
KMO value is 0.879 measure of sampling adequacy	> 0.70	(Watkins, 2018)
Satisfactory communalities values	> 0.50	(Field, 2018)
Total variance explained is 74.685%	> 50%	(Podsakoff & Organ, 1986)
The variance for the first factor is 17.461%	< 50%	(Podsakoff & Organ, 1986)

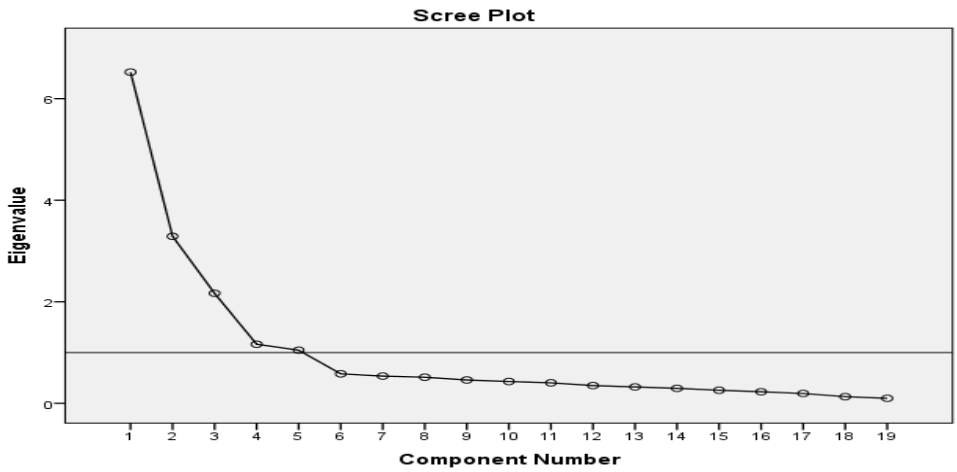

Figure 1. Scree Plot

Table 5. Rotated Component Matrix

	Component					
	1	**2**	**3**	**4**	**5**	**Cronbach's Alpha**
FW1			.879			0.935
FW2			.875			
FW3			.788			
FB1CM1		.726				0.871
FB1CM2		.686				
FB1CM3		.858				
FB1CM4		.843				
FB2S1					.755	0.831
FB2S2					.733	
FB2S3					.805	
FB3RCM1	.776					0.863
FB3RCM2	.698					
FB3RCM3	.892					
FB3RCM4	.901					
FB3RCM5	.738					
FL3A1				.809		0.864
FL3A2				.838		
FL3A3				.870		
FL3A4				.788		

Rotation Sums of Squared Loadings	17.461	33.063	48.633	63.105	74.685	
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 5 iterations.						

Confirmatory Factor Analysis

According to (Xia & Yang, 2019), (Hair, Hult, et al., 2017), and (Kline, 2016) studies, the model must have acceptable convergent and reliability validity as well as model-fit indices through first-order CFA.

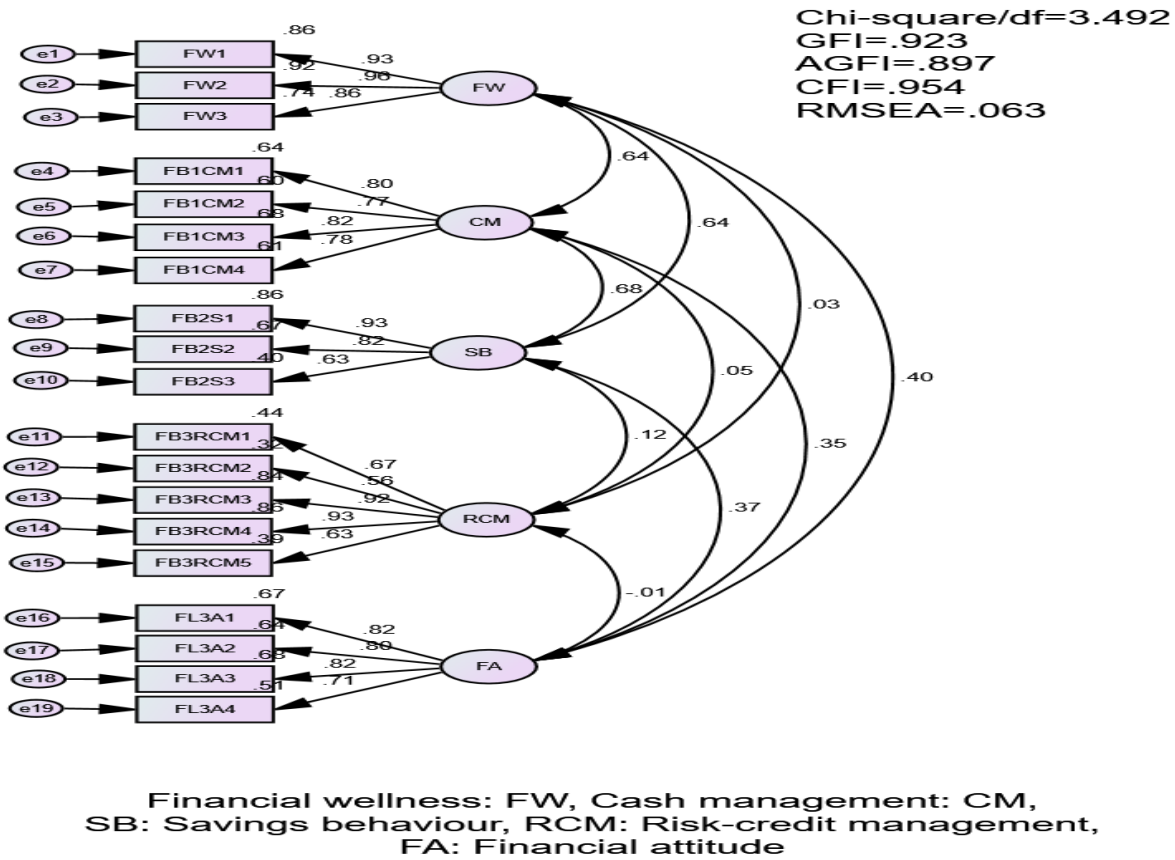

Figure 2. Confirmatory Factor Analysis

The Goodness of Fit Indices

The recommended fit indices' values and their threshold limits are presented in Table-6, which shows that all values meet the threshold criteria. However, p-value of $\chi 2 < 0.05$, which may be because of the large sample size (>200) (Kline, 2016), (Bentler & Bonett, 1980). However, absolute fit indices, relative fit indices, and non-centrality-based indices values make the model acceptable.

Table 6. Goodness of fit indices

Fit index	**Limit**	**Values in the present study**	**References (Hooper et al., 2008), (Chopra & Madan, 2021), (Gaskin, 2021)**	**Acceptability**
Absolute fit indices				
$\chi 2$		495.819		
df		142		
p value	> 0.05	0.000		No
$\chi 2$ / df	1.00 - 5.00	3.492	(Kline, 2016)	Yes

SRMR	< 0.08	0.063	(Hu & Bentler, 1999)	Yes
GFI	> 0.90	0.923	(Hu & Bentler, 1999)	Yes
AGFI	> 0.80	0.897	(Hu & Bentler, 1999)	Yes
Relative fit indices				
NFI	> 0.80	0.937	(Bentler & Bonett, 1980)	Yes
PNFI	> 0.50	0.778	(Bentler & Bonett, 1980)	Yes
IFI	> 0.90	0.954	(Bollen, 1990)	Yes
TLI	> 0.90	0.945	(Tucker & Lewis, 1973)	Yes
Non-centrality-based indices				
CFI	> 0.90	0.954	(Hu & Bentler, 1999)	Yes
PGFI	> 0.50	0.690	(Mulaik et al., 1989)	Yes
RMSEA	< 0.08	0.063	(Xia & Yang, 2019)	Yes

Convergent Validity

According to (Hair, Hult, et al., 2017), the composite reliability of all the constructs must be more than 0.7, for attaining the construct reliability. The average variance extracted (AVE) required is above 0.500, and MSV must be less than AVE for convergent validity. All recommended conditions are passed for the proposed model (Table 7), so we can conclude that the proposed model has a convergent validity.

Table 7. Convergent validity parameters

Construct	**Items**	**Factor Loading (above 0.5)**	**Composite reliability (above 0.7)**	**AVE (above 0.5)**	**MSV (less than AVE)**
Financial Wellness (FW)	FW1	0.928	0.940	0.840	0.411
	FW2	0.959			
	FW3	0.860			
Cash Management (CM)	FB1CM1	0.801	0.872	0.631	0.463
	FB1CM2	0.773			
	FB1CM3	0.823			
	FB1CM4	0.778			
Savings Behavior (SB)	FB2S1	0.927	0.840	0.642	0.463
	FB2S2	0.818			
	FB2S3	0.631			
Risk-credit Management (RCM)	FB3RCM1	0.667	0.865	0.572	0.015
	FB3RCM2	0.564			
	FB3RCM3	0.917			
	FB3RCM4	0.929			
	FB3RCM5	0.626			
Financial Attitude (FA)	FL3A1	0.819	0.869	0.624	0.162
	FL3A2	0.797			
	FL3A3	0.824			
	FL3A4	0.714			

Discriminant Validity

Discriminant validity expresses the uniqueness of each construct from other constructs by empirical standards (Hair, Hult, et al., 2017). To examine discriminant validity, we analyzed AVE > MSV, and the square root of AVE is greater than inter-construct correlations (Table-8). Thus, we can conclude that all the constructs in the proposed model have discriminant validity.

Table 8. Discriminant validity

	Financial Wellness	Cash Management	Risk-credit Management	Savings Behavior	Financial Attitude
Financial Wellness	**0.917**				
Cash Management	0.637	**0.794**			
Risk-credit Management	0.029	0.048	**0.756**		
Savings Behavior	0.641	0.680	0.122	**0.802**	
Financial Attitude	0.402	0.349	-0.007	0.368	**0.790**

Structured Model

After verify model fit, and validity, path analysis has been run on AMOS 23. Figure 3 shows the results of a structure model drawn on AMOS graphics. The goodness of fit indices was Chi-square/df = 3.593, SRMR = 0.067, GFI = 0.920, AGFI = 0.894, NFI = 0.934, PNFI = 0.787, IFI = 0.952, TLI = 0.942, CFI = 0.951, PGFI = 0.697, and RMSEA = 0.64. Table-9 presents standardized regression weights of all the relationships present in the model. Apart from RCM, all values are significant (p-value < 0.05). Therefore, hypothesis H1, H2 and H4 are accepted and H3 rejected. Therefore, we can conclude that cash management, savings behavior, and financial attitude have significant impact on financial wellness.

Table 9. Standardized Regression Weights: hypothesis testing

Hypothesis	Estimate	S.E.	C.R.	P	Acceptance / rejection
H1 – "Cash management has a significant impact on financial wellness."					
FW <--- CM	0.346	0.104	6.441	***	Accepted
H2 – "Savings behavior has a significant impact on financial wellness."					
FW <--- SB	0.355	0.037	16.418	***	Accepted
H3 – "Risk-credit management has a significant impact on financial wellness."					
FW <--- RCM	-0.290	0.110	-0.908	0.364	Rejected
H4 – "Financial attitude has a significant impact on financial wellness."					
FW <--- FA	0.152	0.070	4.214	***	Accepted

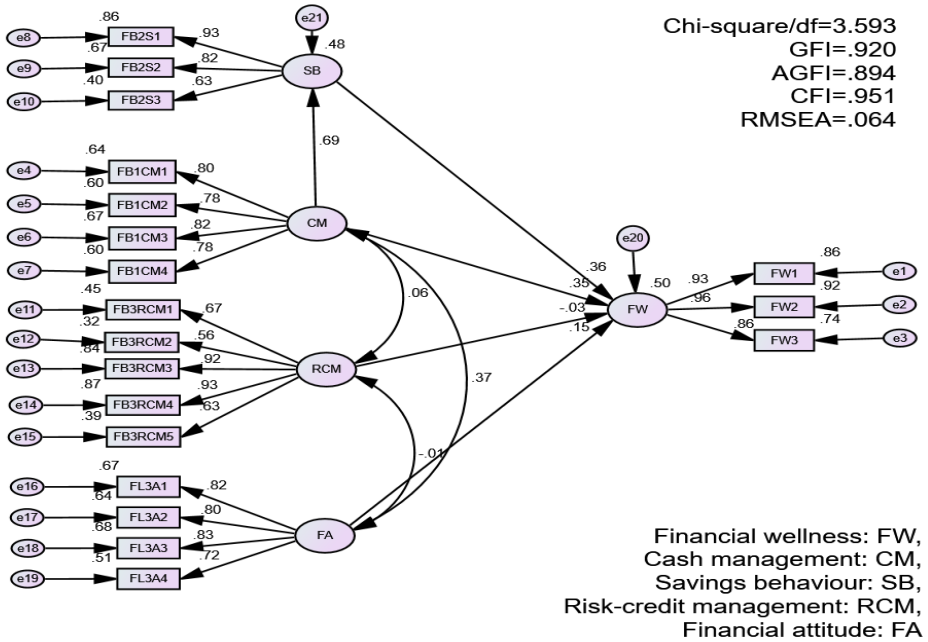

Figure 3. Structure Model

Mediation Analysis

The mediating effect of the savings behavior on the financial wellness of rural households has been tested using a bootstrapping method in AMOS (Kline, 2016), (Hopwood, 2007). The results of bootstrapping methods have been shown in Table 10. The total effect of cash management on financial wellness was significant (β = .591, p = 0.002), such that better cash management led to better financial wellness. The direct effect of cash management on financial wellness was significant (β = .346, p = 0.001), and the indirect effect of cash management on financial wellness in the presence of savings behavior was also significant (β = .245, p = 0.001). The p-value of indirect effect and total effect are > 0, hence partial mediation exists (Aguinis et al., 2017). The Sobel z-value of 6.4790 > 2.58 with p-value of 0.0189 (less than 0.05) indicated that the mediation effect is significant at 95% confidence interval (Abu-Bader & Jones, 2021), (Preacher & Hayes, 2008), (Baron & Kenny, 1986). The results confirmed that savings behavior significantly mediates the relationship between cash management and financial wellness. Thus, hypothesis H5 is accepted, and we can conclude that savings behavior has a partial mediating effect on the relationship between cash management and financial wellness.

Table 10. Results of bootstrapping for mediation analysis

Type of effect	Standardized beta	p-value	Remark
Total effect	.591	.002	Significant total effect
Direct effect	.346	.001	Significant indirect effect
Indirect effect	.245	.001	Significant direct effect

DISCUSSION AND CONCLUSION

The study investigated significant contributors to financial wellness in rural households in the hill districts. These households are members of SHGs and cooperatives, and all are small and marginal farmers. The demographic statistics indicate that most of the members in SHGs and cooperatives are female (87.4%). 76.8% of members were intermediate and below educated, 70.7% were between the age group of 30 to 50, average monthly income of 69.1% members was below INR 9000, and 64.8% had average monthly savings less than INR 900 per month. Landholding data validate that all are small and marginal farmers. Reliability analysis (Cronbach's alpha = .820 > 0.7) of all items confirms the internal consistency of items. Through exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), five constructs such as financial wellness, cash management, savings behavior, risk-credit management, and financial attitude were identified from 19 items. The goodness of fit indices, convergent validity, and discriminant validity support the analysis.

To test the hypothesis, path analysis was conducted. Results revealed that cash management, savings behavior, and financial attitude are significant impacts on financial wellness, which is supported by the hypothesis. The findings are substantiated with the recent literature (CHAVALI et al., 2021), (Gichuhi & Mwangi, 2021), (Maina et al., 2020). The results indicate that if households have positive attitudes towards financial practices and manage their income effectively with proper and regular savings, their financial wellness will increase. The results also indicate that risk-credit management does not significantly impact financial wellness. However, all items of risk-credit management were loaded significantly in EFA and CFA. It indicates that rural households are aware of insurance and credit schemes, but they do not take full advantage of such schemes. The study inspects the mediating effect and has found that savings behavior has a mediating effect on the relationship of cash management to financial wellness.

According to (Anand et al., 2021), (Word Bank, 2020) financial knowledge contributes to the financial wellness of rural households and makes them more robust for tough times. The study also found that rural households have sound financial knowledge about different financial schemes and welfare programs. The results show that households know the essential difference between financial instruments and are well skilled in day-to-day numerical calculations. The results also found that the financial decision is mainly taken after mutual consent of both husband and wife, demonstrating

women's empowerment. These results refer that intensive development activities, including financial literacy programs, and the package of financial practices, significantly impact financial wellness. The results show that SHGs and cooperatives play a significant role in implementing financial inclusion programs (Omar & Inaba, 2020), (Wadhwa, 2020). They not only support income-generating activities but also facilitate knowledge capitalization. Through SHGs, households' savings behavior has increased directly or indirectly, and female participation in financial decision-making has also increased. The study concludes that cash management, savings behavior, financial knowledge, and financial attitude lead to the financial wellness of rural households in hill districts.

PRACTICAL IMPLICATIONS

The study identified factors of financial wellness through theoretical and empirical analysis. The research findings of the study can be more relevant in the areas of rural development, banking, agriculture, and allied sectors. This study can assist in improving the livelihood programs of rural areas, including financial inclusion, especially those implemented in rural hilly areas. This research finding will also support the policymakers to emphasize more on sustainable livelihood opportunities and customized financial inclusion in the hill districts, which will increase financial knowledge and subsequently improve the financial behavior, and financial attitude. Frequent capacity building, regular information dissemination, and service delivery mechanism can also improve the risk-credit schemes. Overall, an increase in financial knowledge, income, and savings is positively related to economic upliftment and contributes to achieving sustainable development goals.

RESEARCH LIMITATION AND FUTURE RESEARCH DIRECTION

This research has highlighted that financial wellness is a function of cash management, savings behavior, and financial attitude, where savings behavior mediates the relationship between cash management and financial wellness. This study has some limitations. The research has been conducted on SHGs and Cooperatives members only. Furthermore, the seasonal migration between rural and semi urban areas of rural households in hill districts has not been considered. These two aspects can be considered for future research. Food security and health affect everyone in remotest rural areas and need to be studied.

AUTHOR CONTRIBUTIONS

Conceptualization: Ajay Purohit, Gaurav Chopra, Parshuram G Dangwal
Data Curation: Ajay Purohit, Gaurav Chopra, Parshuram G Dangwal
Formal Analysis: Ajay Purohit, Gaurav Chopra, Parshuram G Dangwal
Funding Acquisition: Ajay Purohit
Investigation: Ajay Purohit, Gaurav Chopra, Parshuram G Dangwal
Methodology: Ajay Purohit, Gaurav Chopra, Parshuram G Dangwal
Project Administration: Gaurav Chopra, Parshuram G Dangwal
Resources: Ajay Purohit
Software: Ajay Purohit
Supervision: Gaurav Chopra, Parshuram G Dangwal
Validation: Ajay Purohit, Gaurav Chopra, Parshuram G Dangwal
Visualization: Ajay Purohit
Writing – Original Draft: Ajay Purohit
Writing – Review & Editing: Ajay Purohit, Gaurav Chopra, Parshuram G Dangwal

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no competing interests.

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All authors contributed equally to the conception and design of the study.

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NOTES

Note 1. Small and Marginal farmers who have less than 2-hectare operational agriculture landholdings. The average landholding in Uttarakhand is 0.85 hectares (PIB, 2019).

Note 2. Panchasutras - Regular meetings; Regular savings; Regular inter-loaning; Timely repayment; and Up-to-date books of accounts (RBI, 2019).

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