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Factors Affecting Perceived Behavioral Control in Health Insurance Adoption: Evidence from Exploratory Factor Analysis

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ABSTRACT:

Health insurance adoption depends not only on whether individuals consider insurance useful, but also on whether they believe they are capable of purchasing and using it. This study examines the factors affecting Perceived Behavioral Control (PBC) in health insurance adoption using the Decomposed Theory of Planned Behavior (DTPB) as the theoretical framework. Exploratory Factor Analysis (EFA) was conducted on ten statements related to health insurance perceptions and purchase behavior. The results identified three underlying factors: Perceived Ease of Access (PEA), Social Influence and Recommendation (SIR), and Financial Affordability (FA). The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was 0.684, and Bartlett's test of sphericity was significant (Approx. Chi-square = 3430.416; df = 45; $p < .001$), confirming that the data were suitable for factor analysis. Three components with eigenvalues greater than one were extracted, together explaining 68.621% of the total variance. The findings indicate that ease of purchasing and claiming insurance, recommendations from employers, colleagues, advisors, and online reviews, and the affordability of premiums and out-of-pocket expenses are important dimensions influencing consumers' perceived control over health insurance adoption.

1. INTRODUCTION

Health insurance is a financial arrangement in which an insurer or public scheme provides specified benefits towards healthcare costs. An individual, household, employer or government body may pay a premium or contribution, depending on the arrangement. Insurance does not cover every cost or guarantee payment in every circumstance. Its value depends on the policy terms, including covered services, limits, waiting periods, exclusions, co-payments, provider networks and claim conditions (Waelkens et al., 2017).

Health insurance has transformed into an indispensable resource for defending people and families against the fiscal challenges posed by medical treatment. The rise in healthcare expenditures, the growing incidence of lifestyle-related health issues, and the unpredictability of medical emergencies pose significant risks for out-of-pocket payments, particularly for economically disadvantaged households. Health insurance might diminish this risk by supplying fiscal safeguards, enhancing accessibility to healthcare resources, and permitting folks to seek immediate therapy without hesitation due to financial worries (Aljuaid et al., 2022; Goodwin, 2008).

Health insurance adoption is often influenced not only by individuals' attitudes and intentions but also by their perceived ability to complete the enrolment process. In the Theory of Planned Behaviour, perceived behavioural control refers to the perceived ease or difficulty of performing a behaviour and captures the presence or absence of resources and opportunities required for action. Health insurance serves as a crucial financial safeguard by assisting individuals in handling medical expenses and mitigating the likelihood of overwhelming healthcare costs. Nevertheless, numerous individuals who may gain from health

insurance fail to acquire it. This disparity between the demand for insurance and its actual uptake may arise from individuals lacking confidence, competence, or adequate help to finalise the acquisition process (Mishra et al., 2024).

Health insurance can protect households against unexpected healthcare expenditure, yet acquiring coverage may involve financial, informational, and administrative barriers. Insurance adoption requires consumers to assess premiums, compare policy features, interpret exclusions, and navigate enrolment procedures. Research among low-income households in Delhi documented limited awareness and possession of health insurance, highlighting the importance of access and socioeconomic circumstances (Kusuma et al., 2018). This study examines three proposed antecedents of perceived behavioral control (PBC): financial affordability (FA), perceived ease of access (PEA), and social influence and recommendation (SIR). In the context of health insurance, individuals may wish to acquire coverage yet find themselves hindered by exorbitant prices, convoluted enrolment processes, or a deficiency of support from reliable sources. Ajzen(1991) recognises financial resources, temporal availability, competencies, and collaborative support from others as instances of control variables that might influence perceived behavioural control. Consequently, comprehending the elements that influence PBC is crucial for formulating strategies that enhance health insurance enrolment.

2. THEORETICAL FRAMEWORK

2.1 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB), introduced by (Ajzen,1991) posits that a person's actions are predominantly influenced by their behavioural intentions. Intention signifies an individual's readiness and strategy to engage in a specific action. This research examines the conduct associated with the acquisition of health insurance, encompassing information gathering, policy comparison, comprehension of coverage, document organization, premium payment, and enrolment finalization.

2.2 Decomposed Theory of Planned Behavior

Despite the prevalent utilisation of the original Theory of Planned Behaviour, it conceptualises attitude, subjective norm, and perceived behavioural control as overarching, generalised categories. Taylor and Todd (1995) introduced the Decomposed Theory of Planned Behaviour (DTPB) to enhance the theory's specificity and detail. DTPB disaggregates the principal TPB categories into more detailed belief dimensions, enabling researchers to discern the individual beliefs that affect attitude, social influence, and perceived control.The DTPB retains the basic structure of TPB but provides a more granular explanation of behavior. Instead of only asking whether a person has high or low PBC, DTPB examines the specific resources and conditions that create that perception of control(Taylor & Todd, 1995).

2.3 Decomposition in the Present Study

This study applies the logic of DTPB to health insurance adoption by identifying the specific factors that influence Perceived Behavioral Control. Based on the EFA results, PBC is proposed to be affected by three belief-based factors:

1. Social Influence and Recommendation (SIR)
2. Financial Affordability (FA)
3. Perceived Ease of Access (PEA)

These factors represent different types of control-related conditions that may make health insurance adoption appear easier or more difficult.

3. HYPOTHESES DEVELOPMENT

3.1 Financial Affordability and PBC

Financial Affordability (FA) refers to the perceived ability to pay the costs associated with health insurance. These costs may include premiums, deductibles, co-payments, renewal charges, and other out-of-pocket expenses. Affordability is a central control factor because insurance purchase requires financial resources. Ajzen(1991) identifies money as one of the major factors that can facilitate or inhibit behavior. If a person believes that the premium is within their budget, they are more likely to feel capable of purchasing and maintaining the policy. Financial affordability affects not only the initial purchase but also long-term continuation. A policy may appear affordable in the first year but may become difficult to renew if income changes or premiums increase. Therefore, consumers evaluate both current and future affordability (Kusuma et al., 2018).Research on health

insurance in India consistently identifies high premium costs and financial constraints as major barriers to adoption. When individuals perceive insurance as affordable, the behavior appears more achievable, thereby increasing PBC.

H1: Financial Affordability positively affects Perceived Behavioral Control in health insurance adoption.

3.2 Perceived Ease of Access and PBC

Perceived Ease of Access (PEA) refers to the perceived convenience of obtaining health insurance information and completing the enrolment process. It includes the availability of clear policy information, simple documentation, digital enrolment platforms, customer support, comparison tools, and accessible claim procedures (Waelkens et al., 2017).Health insurance can appear complicated because policies contain technical terms such as waiting periods, exclusions, co-payments, room-rent limits, network hospitals, and claim settlement procedures. If consumers find this information difficult to understand, they may feel that they lack the knowledge or ability to choose the right policy (Kusuma et al., 2018). PEA reduces this difficulty. When consumers can easily access policy details, compare plans, speak to customer support, and complete enrolment online or offline, they are more likely to feel confident about adopting insurance. In DTPB, this factor is similar to facilitating conditions because it represents the availability of resources and support needed to perform the behavior.

H2: Perceived Ease of Access positively affects Perceived Behavioral Control in health insurance adoption.

3.3 Social Influence and Recommendation and PBC

Social Influence and Recommendation (SIR) refers to the advice, encouragement, approval, and recommendations received from employers, colleagues, financial advisors, insurance agents, and online customer reviews.In many cases, insurance decisions are influenced by trusted external sources. Employees may be more likely to purchase insurance when employers or colleagues recommend it. Financial advisors and insurance agents may provide guidance about policy selection, documents, premiums, and claim procedures. Online reviews and customer feedback also help consumers evaluate the reliability and service quality of insurance providers. SIR is expected to increase PBC because it reduces uncertainty. Health insurance involves financial commitment and complex decision-making. Consumers may worry about choosing the wrong policy, hidden exclusions, claim rejection, or paying for coverage they may not use. Recommendations from trusted people provide reassurance and practical knowledge, making the process appear more manageable (Taylor & Todd, 1995). In the DTPB framework, SIR is related to the subjective norm dimension because it reflects the influence of important social referents. However, in this study, SIR is expected to affect PBC because social guidance also increases the individual's confidence and perceived ability to act.

H3: Social Influence and Recommendation positively affects Perceived Behavioral Control in health insurance adoption.

4. CONCEPTUAL FRAMEWORK

The proposed conceptual framework is based on the Decomposed Theory of Planned Behavior. It suggests that FA, PEA, and SIR are specific belief-based factors that influence PBC.

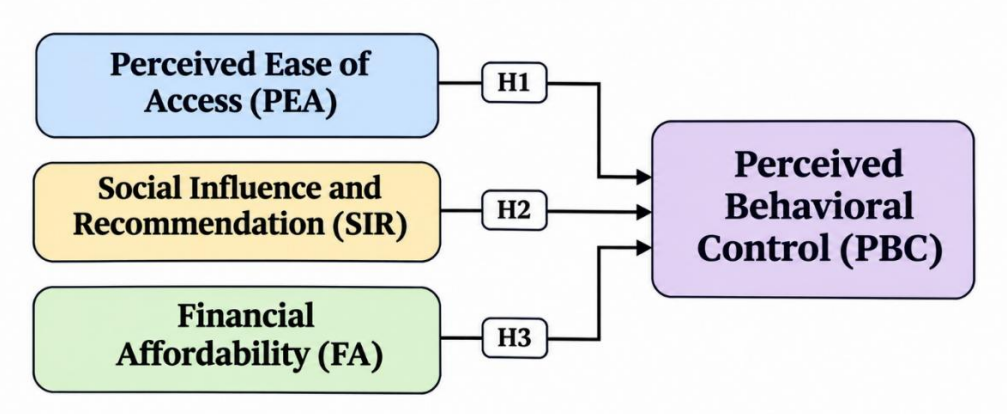

Figure1: The conceptual Framework

Table1: Constructs in hypothesis

Construct	Role in the model	Theoretical basis	References
Financial Affordability (FA)	Independent variable	Money and ability to pay premiums are essential resources for insurance adoption	Ajzen (1991); Kusuma et al. (2018); Zhang et al., 2025
Perceived Ease of Access (PEA)	Independent variable	Convenient access to information and enrollment reduces perceived difficulty	Ajzen (2002); Mishra et al., 2022
Social Influence and Recommendation (SIR)	Independent variable	Recommendations and trusted opinions reduce uncertainty and increase confidence	Bianchi et al., 2018; Berkman et al., 2011
Perceived Behavioral Control (PBC)	Dependent variable	The individual's perceived ability to adopt health insurance	Ajzen (1991, 2002); Taylor & Todd (1995);

Table 1 represents the model has four constructs. Three are independent variables, FA, PEA and SIR, each capturing a different condition that can make adoption feel easier or harder: money (FA), practical access and understanding (PEA), and trusted guidance (SIR). The fourth, PBC, is the dependent variable and represents the respondent's overall confidence that they can buy and keep a health insurance policy. The "Theoretical basis" column shows why each independent variable is expected to raise PBC.

5. RESEARCH METHODOLOGY

5.1 Research Design

This study uses a quantitative, cross-sectional survey design. Primary data were collected through a structured questionnaire from individuals who were potential health insurance buyers, current policyholders, or individuals who had considered purchasing health insurance.

5.2 Sampling

A convenience sampling technique used for the study. However, the sample should include respondents from different age groups, income levels, education levels, occupations, and residential backgrounds to improve the representativeness of the results. The sample size should be adequate for factor analysis. A common guideline is to include at least 5 to 10 respondents per questionnaire item. Since this study analysed 10 statements, a sample of at least 400 respondents would meet the minimum requirement; however, a larger sample is preferable for more stable results.

5.3 Questionnaire Development

The questionnaire includes 10 statements measuring FA, PEA, and SIR. All items are measured on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The statement "I feel that health insurance is an unnecessary burden" was treated as a reverse-coded item. Therefore, a higher score indicates stronger agreement that insurance is *not* an unnecessary burden and is financially acceptable.

Table 2: Questionnaire statements by construct

Construct	Statements
Financial Affordability (FA)	"The cost of health insurance fits within my financial budget"; "I feel that health insurance is an unnecessary burden" (reverse coded); "I have sufficient financial resources to handle out-of-pocket expenses even with insurance"

Construct	Statements
Perceived Ease of Access (PEA)	"Purchasing health insurance is a simple and hassle-free process"; "The claim process for health insurance is straightforward and easy to follow"; "I find it difficult to understand the paperwork and documentation required for health insurance" (reverse coded); "Digital platforms have made health insurance more accessible and convenient"
Social Influence and Recommendation (SIR)	"I am more likely to buy a health insurance policy if my employer or colleagues recommend it"; "I trust the opinion of financial advisors or insurance agents when selecting a policy"; "I often look at online reviews and customer feedback before choosing a health insurance provider"

Table 2 lists the 10 items as they were designed to measure the three constructs: three for FA, four for PEA and three for SIR. FA items cover budget fit, perceived burden and the ability to meet out-of-pocket costs. PEA items cover purchase, claims, paperwork and digital convenience, which correspond to the facilitating conditions described by Taylor and Todd (1995). SIR items cover employer or colleague recommendations, trust in advisors or agents, and online reviews, which correspond to the peer and superior influences in the same framework. These design-stage groupings are what the EFA in Section 6 tests: if respondents' answers follow the same grouping, the items will load together on three separate components.

5.4 Data Analysis

The data were analysed using Exploratory Factor Analysis (EFA). The principal component method was used for factor extraction, and Varimax rotation with (Kaiser, 1958) normalization was applied to improve the interpretability of the factors.

The following tests were conducted:

- Kaiser–Meyer–Olkin (KMO) test for sampling adequacy.
- Bartlett's test of sphericity.
- Principal Component Analysis (PCA).
- Extraction of components based on eigenvalues greater than one.
- Varimax rotation.
- Examination of factor loadings and total variance explained.

6. DATA ANALYSIS AND RESULTS

6.1 KMO and Bartlett's Test

The KMO measure of sampling adequacy for the 10 variables was 0.684. This value is above the commonly accepted threshold of 0.60, indicating that the sample size and correlations among variables are adequate for factor analysis (Kaiser, 1970; Tabachnick & Fidell, 2019). Bartlett's test of sphericity was statistically significant, with an approximate chi-square value of 3430.416, df = 45, and $p < .001$. This indicates that the correlation matrix is not an identity matrix and that there are sufficient relationships among the variables to justify factor analysis (Bartlett, 1954).

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.684
Bartlett's Test of Sphericity	Approx. Chi-Square	3430.416
	df	45
	Sig.	0

Table 3 represents the KMO value of 0.684 is above the 0.60 threshold, so the sample and the pattern of correlations are adequate for factor analysis. In Kaiser and Rice's (1974) verbal labels, values in the 0.60s are described as mediocre, so the result is acceptable but not strong. Bartlett's test is significant ($\chi^2 = 3430.416$, $df = 45$, $p < .001$). The degrees of freedom follow from the number of items, $p(p - 1)/2 = 10 \times 9 / 2 = 45$. A significant result means the correlation matrix is not an identity matrix and the items are sufficiently inter-related to justify factor analysis. Bartlett's test is sensitive to sample size and is almost always significant in large samples, so it should be read together with the KMO value (Tabachnick & Fidell, 2019). Both tests therefore support proceeding with EFA.

6.2 Factor Loadings of the Statements

A factor loading is the correlation between a statement and a factor. Loadings of 0.50 or above are generally considered practically significant, and loadings of 0.70 or above indicate a well-defined factor (Hair et al., 2019).

Table 4: Factor Loading of each statement

S.No	Statements	Factor Loading
1	The cost of health insurance fits within my financial budget	0.929
2	I feel that health insurance is an unnecessary burden	0.938
3	I have sufficient financial resources to handle out of pocket expenses even with insurance	0.679
4	Purchasing health insurance is a simple and hassle-free process	0.878
5	The claim process for health insurance is straightforward and easy to follow	0.751
6	I find it difficult to understand the paperwork and documentation required for health Insurance.	0.684
7	Digital platforms have made health insurance more accessible and convenient	0.729
8	I am more likely to buy a health insurance policy if my employer or colleagues recommend it	0.761
9	I trust the opinion of financial advisors or insurance agents when selecting a policy	0.882
10	I often look at online reviews and customer feedback before choosing a health insurance provider	0.795

Table 4 shows the factor loadings indicate the strength of the relationship between each statement and the underlying factor. Loadings above 0.50 are generally considered acceptable, while loadings above 0.70 indicate strong associations. Statements 1, 2, and 3 show strong loadings related to financial considerations. Statements 4, 5, 6, and 7 represent the ease and convenience of purchasing, understanding, claiming, and accessing health insurance. Statements 8, 9, and 10 reflect the influence of employers, colleagues, financial advisors, insurance agents, and online reviews.

Table 5: Total Variance Explained

		Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings	
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.016	30.165	30.165	3.016	30.165	30.165	2.319	23.187	23.187
2	2.054	20.537	50.702	2.054	20.537	50.702	2.306	23.056	46.243
3	1.792	17.918	68.621	1.792	17.918	68.62	2.238	22.377	68.62

4	0.747	7.471	76.092						
5	0.631	6.307	82.397						
6	0.52	5.197	87.594						
7	0.481	4.813	92.407						
8	0.409	4.095	96.502						
9	0.339	3.388	99.89						
10	0.011	0.111	100						

Table 5 presents the results of an eigenvalue analysis, highlighting the variance explained by each extracted factor. The initial eigenvalues column shows the total variance captured by each component before extraction. Notably, the first three components have eigenvalues greater than 1, indicating their significance in explaining the dataset's variability. Component 1 has the highest eigenvalue of 3.016, accounting for 30.165% of the total variance. Component 2 follows with an eigenvalue of 2.054, contributing 20.537%, while Component 3 has an eigenvalue of 1.792, explaining 17.918%. Collectively, these three components account for 68.621% of the total variance, suggesting that they are the key drivers of variability in perceived behaviour of health insurance. The extraction sums of squared loadings confirm that these three components remain significant after factor extraction, maintaining the same variance percentages as in the initial eigenvalue's column. After applying rotation to enhance interpretability, the variance distribution among the three components becomes more balanced. Component 1 now explains 23.187% of the variance, Component 2 accounts for 23.056%, and Component 3 captures 22.377%. While the cumulative variance remains at 68.62%, the rotation has optimized the contribution of each factor, ensuring a more even distribution of explained variance across the three key components. On the other hand, components 4 to 10 have eigenvalues below 1, contributing minimal variance. Since these components explain little additional variance, they are not retained for further analysis. Their low eigenvalues indicate that they do not provide significant new insights beyond the three principal components. In conclusion, the analysis confirms that three principal components sufficiently explain 68.62% of the total variance, making them the most relevant factors for further investigation. The rotation process has further refined their contribution, ensuring a clearer interpretation of the dataset's structure.

Table 6: Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)			
Component			
	1	2	3
FA2			0.944
FA3			0.949
FA4			0.599
PEA1	0.657		
PEA2	0.775		
PEA3	0.751		
PEA4	0.757		
SIR2		0.849	
SIR3		0.849	
SIR4		0.825	

Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

The Rotated Component Matrix presents the factor loadings for each variable after applying Principal Component Analysis (PCA) with varimax rotation is presented in table 6. This matrix helps identify which variables strongly associate with each of the three extracted components. Factor loadings closer to 1 or -1 indicate a strong correlation between the variable and the component. In Component 1, four variables (PEA1, PEA2, PEA3, and PEA4) exhibit strong loadings, ranging from 0.657 to 0.775. This suggests that Component 1 primarily represents factors related to Perceived Ease of Access (PEA). Component 2 has high loadings for three variables (SIR2, SIR3, and SIR4), all exceeding 0.825. This indicates that Component 2 captures Social Influence and Recommendation (SIR) factors, showing that these variables strongly influence the component's meaning. Component 3 is defined by three high-loading variables (FA2, FA3, and FA4), with values ranging from 0.599 to 0.949. The strongest loadings, 0.944 and 0.949, suggest that this component represents Financial Affordability (FA) as a key determinant. The rotation was performed using the Varimax method with Kaiser Normalization, and it converged in five iterations, ensuring an optimal distribution of variance among the three components. This rotation improves interpretability by minimizing cross-loadings and enhancing clarity in the grouping of factors.In summary, the analysis reveals that the dataset can be effectively explained by three distinct factors: Perceived Ease of Access (Component 1), Social Influence and Recommendation (Component 2), and Financial Affordability (Component 3). These findings help in understanding the underlying structure of the data and highlight the critical dimensions influencing the study variables.

The Rotated Component Matrix shows that the 10 statements loaded clearly onto three components.

- Component 1: Perceived Ease of Access (PEA) includes PEA1, PEA2, PEA3, and PEA4, with loadings ranging from 0.657 to 0.775.
- Component 2: Social Influence and Recommendation (SIR) includes SIR2, SIR3, and SIR4, with loadings ranging from 0.825 to 0.849.
- Component 3: Financial Affordability (FA) includes FA2, FA3, and FA4, with loadings ranging from 0.599 to 0.949.

7. DEVELOPMENT OF FACTORS

7.1 Financial Affordability

Financial Affordability is the first factor identified through EFA. It includes three statements:

1. "The cost of health insurance fits within my financial budget."
2. "I feel that health insurance is an unnecessary burden" (reverse coded).
3. "I have sufficient financial resources to handle out-of-pocket expenses even with insurance."

Financial Affordability is the perceived ability to pay health insurance premiums and manage additional healthcare-related expenses. It is a key determinant of adoption because buying insurance requires financial resources (Ajzen, 1991; Kusuma et al., 2018). It is measured by three statements: budget fit, the burden of insurance (reverse coded), and sufficient resources for out-of-pocket expenses.

Table 7: Financial affordability:item mean

S. No	Financial Affordability	Mean
1.	The cost of health insurance fits within my financial budget	4.42
2.	I feel that health insurance is an unnecessary burden	4.35
3.	I have sufficient financial resources to handle out of pocket expenses even with insurance	4.38

Table 7 showing the highest mean score, 4.42, indicates that most respondents believe that the cost of health insurance fits within their financial budget. The mean score of 4.38 also shows that respondents feel they have sufficient financial resources to manage out-of-pocket expenses even after having insurance.Because the statement "I feel that health insurance is an unnecessary burden" was reverse coded, its mean score of 4.35 indicates that respondents generally do not consider health insurance an unnecessary burden. In other words, respondents perceive insurance as financially acceptable rather than as an

unnecessary financial strain.Overall, the results suggest that respondents generally perceive health insurance as affordable and manageable within their financial capacity. This perception may strengthen their belief that they are capable of purchasing and maintaining health insurance.

7.2 Perceived Ease of Access

Perceived Ease of Access is the second factor identified through EFA. It includes four statements:

1. "Purchasing health insurance is a simple and hassle-free process."
2. "The claim process for health insurance is straightforward and easy to follow."
3. "I find it difficult to understand the paperwork and documentation required for health insurance" (reverse coded).
4. "Digital platforms have made health insurance more accessible and convenient."

Perceived Ease of Access reflects how simple and convenient individuals find the process of obtaining and using health insurance. When purchasing insurance is hassle-free and the claim process is easy to understand, individuals are more likely to feel capable of adopting and using insurance.

Table 8: Perceived Ease of Access

S.No	Perceived Ease of Access	Mean
1	Purchasing health insurance is a simple and hassle-free process	4.19
2	The claim process for health insurance is straightforward and easy to follow	4.17
3	I find it difficult to understand the paperwork and documentation required for health Insurance	4.20
4.	Digital platforms have made health insurance more accessible and convenient	4.30

Table 8 representing the highest mean score, 4.30, was recorded for the statement that digital platforms have made health insurance more accessible and convenient. This indicates that respondents view technology as an important tool for improving access to insurance services.

The mean score of 4.19 suggests that respondents generally consider the purchase process to be simple and hassle-free. The mean score of 4.17 indicates that the claim process is also perceived as relatively straightforward, although it received the lowest mean among the PEA items. Because the statement about difficulty in understanding paperwork was reverse coded, its mean score of 4.20 indicates that respondents generally do not find insurance paperwork and documentation overly difficult. However, the relatively lower mean scores for the purchase and claim-process statements suggest that some procedural challenges may still exist.Overall, respondents perceive health insurance as accessible, particularly due to digital platforms. This may increase their confidence in completing the enrollment and claim processes, thereby strengthening PBC.

7.3 Social Influence and Recommendation

Social Influence and Recommendation is the third factor identified through EFA. It includes three statements:

1. "I am more likely to buy a health insurance policy if my employer or colleagues recommend it."
2. "I trust the opinion of financial advisors or insurance agents when selecting a policy."
3. "I often look at online reviews and customer feedback before choosing a health insurance provider."

Social Influence and Recommendation refers to the influence of trusted external sources on health insurance decisions. These sources may include employers, colleagues, financial advisors, insurance agents, and online customer reviews.

Table 9: Social Influence and Recommendations: items mean

S.No	Social Influence and Recommendations	Mean
1.	I am More likely to buy a health insurance policy if my employer or colleagues recommend it'	4.27
2.	I trust the opinion of financial advisors or insurance agents when selecting a policy	4.35
3.	I often look at online reviews and customer feedback before choosing a health insurance provider	4.28

Table 9 shows the highest mean score, 4.35, was recorded for trust in financial advisors or insurance agents. This indicates that professional guidance plays an important role in helping consumers select health insurance policies. The mean score of 4.28 shows that online reviews and customer feedback also strongly influence consumers' choices. This reflects the growing importance of digital platforms in shaping consumer perceptions of insurers and insurance products. The mean score of 4.27 indicates that recommendations from employers or colleagues also have a substantial impact. Peer recommendations may build trust because individuals often rely on the experiences of people within their social or professional network. Overall, the results suggest that consumers depend on both professional advice and social or digital sources of information when making health insurance decisions. These sources may reduce uncertainty and increase consumers' confidence in their ability to choose and purchase a suitable policy.

8. DISCUSSION

8.1 Financial Affordability

The EFA shows that Financial Affordability is a distinct factor in how respondents think about health insurance. The high loadings of the affordability statements (Tables 4 and 6) indicate that views about premiums, budget fit and out-of-pocket expenses form a meaningful dimension. Affordability affects PBC because money is a direct requirement for buying insurance (Ajzen, 1991). A consumer may recognise the importance of insurance but still feel unable to act if the premium is beyond their budget. The mean scores (Table 7) suggest that respondents generally see health insurance as affordable, which may increase their confidence in buying and maintaining a policy. This contrasts with evidence from low-income urban households in Delhi, where possession of insurance was low (Kusuma et al., 2018). The difference may reflect the composition of the present sample, which should be described in the sample profile

8.2 Perceived Ease of Access

Perceived Ease of Access emerged as the first component of the rotated solution, and it explains the largest share of variance before rotation (30.165%; Table 5). The four PEA items load strongly on it, so views about purchase simplicity, claim procedures, documentation and digital accessibility form a coherent dimension. PEA affects PBC because it reduces the effort needed to complete adoption: if consumers can find information, understand documents, compare policies and enrol easily, they are more likely to feel capable of adopting insurance. This is consistent with the role of facilitating conditions in the DTPB (Taylor & Todd, 1995) and with the self-efficacy side of PBC (Ajzen, 2002). Digital platforms received the highest mean in this factor (Table 8), which suggests that insurers should continue to invest in user-friendly digital tools, mobile applications, online policy information and digital claims facilities.

8.3 Social Influence and Recommendation

Social Influence and Recommendation also emerged as a distinct factor. The high loadings for employer recommendations, trust in advisors or agents, and reliance on online reviews (0.825 to 0.849; Table 6) indicate that external opinions play an important role in health insurance decisions. In the DTPB, such referents belong to subjective norm (Taylor & Todd, 1995); the present results suggest that in this context they are also experienced as a source of control, because recommendations reduce uncertainty. Professional advice appears especially influential, as trust in advisors or agents has the highest mean (Table 9). Insurers and policymakers should therefore consider trusted advisors, employer-based communication, peer testimonials and verified online reviews as ways to improve consumer confidence.

9. PRACTICAL IMPLICATIONS

9.1 Implications for Insurance Companies

Insurance companies should recognize that consumers do not purchase insurance only because they understand its benefits. They also need to feel capable of completing the purchase.

9.2 Implications for Policymakers

Policymakers can increase health insurance adoption by reducing financial and informational barriers. Government-supported schemes, subsidies for eligible groups, awareness campaigns, and simplified enrolment systems can improve perceived control among consumers.

Policymakers should also focus on insurance literacy. Many individuals may not fully understand how insurance works, what is covered, or how claims are made. Improving insurance literacy can increase both confidence and adoption.

9.3 Implications for Healthcare Providers

Hospitals, clinics, and healthcare professionals can play an important role by providing reliable information about insurance. Since patients often trust healthcare providers, their guidance may help individuals understand the practical value of insurance and the steps required to obtain it.

10. LIMITATIONS AND FUTURE RESEARCH

First, the study uses self-reported data, which may be affected by response bias. Respondents may overstate their willingness or ability to purchase insurance. Second, EFA identifies patterns among variables but does not prove causality. Although the model proposes that FA, PEA, and SIR affect PBC, longitudinal or experimental research would provide stronger evidence of causal relationships. Third, the KMO value of 0.684 indicates acceptable but not exceptional sampling adequacy. Future studies should use larger and more diverse samples to improve the stability of the factor structure. Future research should test the proposed model using Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM). CFA can verify whether the EFA-derived factors fit the data well, while SEM can test the direct and indirect effects among constructs. Future studies should also examine whether the relationship between FA, PEA, SIR, and PBC differs across gender, marital status, income, education, urban-rural residence, and prior insurance experience. Researchers may also include actual insurance purchase behavior as the final outcome variable to test the complete DTPB pathway

11. CONCLUSION

This study examined the factors affecting Perceived Behavioral Control in health insurance adoption using Exploratory Factor Analysis. The results identified three meaningful factors: Financial Affordability, Perceived Ease of Access, and Social Influence and Recommendation. The KMO value of 0.684 and the significant Bartlett's test confirmed that the data were suitable for factor analysis. Three components with eigenvalues greater than one were extracted, explaining 68.621% of the total variance. After Varimax rotation, the factors were clearly identified as PEA, SIR, and FA. The findings suggest that consumers' perceived control over health insurance adoption is shaped by their ability to afford insurance, the convenience of purchasing and claiming insurance, and the influence of trusted social and professional sources. Therefore, improving affordability, simplifying insurance procedures, strengthening digital access, and promoting reliable recommendations may increase consumers' confidence and support higher health insurance adoption.

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