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RESEARCH ARTICLE

The Role of Life Insurance in Poverty Reduction: Mediating Effect of Financial Inclusion in Karnali Province, Nepal

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ABSTRACT

Purpose: This study examines the relationship between life insurance access and utilization and household poverty in Karnali Province, Nepal, with particular emphasis on the mediating role of financial inclusion

Design/methodology/approach: A cross-sectional, explanatory design guided the study. Using purposive sampling, responses were gathered from 150 participants, and the resulting data were tested through Partial Least Squares Structural Equation Modelling (PLS-SEM).

Findings: Households with greater life insurance access showed measurably better financial inclusion and lower poverty levels, both effects reaching statistical significance. Financial inclusion itself, however, showed no meaningful link to poverty outcomes, and it failed to carry (mediate) the influence of life insurance through to poverty reduction.

Practical implications: Given these results, broadening life insurance access appears to offer households a more direct path toward financial stability and reduced poverty. Financial inclusion initiatives, by contrast, are unlikely to move the needle on poverty unless paired with stronger income opportunities and financial literacy training.

Originality/value: Drawing on data from one of Nepal's most understudied and economically disadvantaged regions, this research challenges the common assumption that financial inclusion automatically translates into reduced poverty. Instead, it positions life insurance as the more consequential factor, a finding that adds a distinct empirical contribution to the insurance-and-development literature.

JEL Classification: D14, G22, I32, O16.

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Introduction

Across much of the developing world, escaping poverty remains an uphill struggle, and nowhere is this more visible than in households with irregular income, scarce jobs, and hard-to-reach financial services. When illness strikes, a natural disaster hits, or a family loses its primary earner, low-income households often have little to fall back on, and the result is frequently a deeper slide into poverty (World Bank, 2022). It is precisely in these moments that financial protection tools matter most, offering a buffer that supports both immediate resilience and longer-term economic stability. Life insurance stands out among such tools: it gives households a way to manage risk, safeguard future earnings, and stay financially afloat when crisis hits (Arena, 2008).

Two theoretical lenses anchor this study. The first, Financial Inclusion Theory, holds that when individuals and households can access financial services that are both affordable and appropriately designed, they participate more fully in economic life, build a stronger financial footing, and see their poverty risk decline (Demirgüç-Kunt et al., 2018). The second, Risk Management Theory, frames insurance as a tool for absorbing uncertainty, a mechanism that softens the financial blow of unexpected events (Vaughan & Vaughan, 2014). Taken together, these perspectives suggest that life insurance does more than shift risk away from a household; it actively builds the household's capacity to withstand emergencies through the economic support it provides.

Beyond its role at the household level, life insurance has come to be seen as a driver of broader social and economic progress. Evidence from earlier research points to its contribution toward economic growth largely through mobilizing savings over the long term, spurring investment, and lowering households' exposure to financial risk (Beck & Webb, 2003; Outreville, 2013). Micro-insurance products,

designed specifically with low-income populations in mind, add another layer of protection: they let families absorb financial shocks without resorting to high-interest borrowing or liquidating the few productive assets they hold (Churchill & Matul, 2012). Through these channels, life insurance ends up supporting not just individual households but more sustainable livelihoods across vulnerable populations, ultimately feeding into poverty reduction.

Nepal's policy landscape has increasingly placed financial inclusion, understood as broad, affordable access to services such as savings, credit, insurance, and payment systems (Demirgüç-Kunt et al., 2018), at the centre of its inclusive growth and poverty-reduction agenda. However, policy intent and institutional expansion have not translated evenly across the country: in remote areas like Karnali Province, formal financial services remain out of reach for many. Rural households continue to face a mix of obstacles: geographic isolation, thin financial literacy, weak infrastructure, and limited institutional presence that together keep them on the margins of the formal financial system (Government of Nepal, 2023). Against this backdrop, expanding life insurance access could serve two purposes at once: shielding households financially while simultaneously drawing them into deeper engagement with formal financial institutions.

A gap nonetheless persists in the literature. While the financial inclusion–poverty reduction relationship has drawn considerable scholarly attention, life insurance's specific contribution to that relationship is comparatively unexamined, particularly in regions that are both remote and economically marginalized. Much of the existing evidence base leans toward banking, microfinance, and credit access, leaving insurance's poverty-reducing potential comparatively unexplored (Beck et al., 2015). Even less is known about whether financial inclusion functions as a mediating pathway, that is, whether it is the mechanism through which life insurance participation translates into reduced poverty. In Nepal specifically, where rural insurance penetration remains low, this gap carries added weight.

This study takes up that gap directly, focusing on Karnali Province to assess how life insurance access and utilization shape both financial inclusion and poverty outcomes and, critically, whether financial inclusion mediates that relationship. In doing so, the research aims to extend the insurance-and-development literature while offering practical guidance to policymakers, insurers, and financial institutions working to strengthen household financial security and reduce poverty in marginalized communities.

Literature Review

Household economic security and poverty alleviation are widely tied, in the literature, to the presence of insurance services. Life insurance carries particular weight here: when a primary earner dies, the resulting income shock can push a household deeper into poverty, and life insurance exists precisely to guard against that outcome. Functionally, it operates as a risk-transfer instrument, one that keeps consumption steady and shields household assets when adversity strikes (Churchill & Marisetty, 2020; Ghimire et al., 2024). The financial compensation it provides gives families room to maintain their standard of living without resorting to desperate measures like liquidating productive assets or turning to high-interest loans.

The evidence backing insurance's poverty-reducing role is substantial. Research spanning multiple developing economies finds that households with insurance access cope better with shocks and achieve steadier long-term economic footing (Omar & Inaba, 2020). At a broader level, growth in insurance markets has itself been connected to poverty reduction, largely by channeling savings, strengthening financial security, and stimulating investment (Arena, 2008). That said, none of this holds automatically; insurance only delivers these benefits where it is genuinely accessible and affordable, a condition that's far from guaranteed for low-income populations (Beck et al., 2015).

There is also a financial-inclusion dimension to consider. Buying into an insurance scheme tends to pull individuals into closer contact with formal financial institutions, which in turn opens the door to other services, such as savings accounts, credit lines, and digital payment systems. In this sense, insurance functions less as an endpoint and more as a gateway into the broader formal financial system.

This pattern shows up clearly in the evidence on micro-insurance: products designed for low-income populations have been shown to meaningfully deepen financial inclusion, effectively pulling previously excluded households into formal financial markets (Anifowose & Chummun, 2025). The mechanism runs through risk management, as life insurance gives households better tools to handle risk; it simultaneously deepens their engagement with the wider financial system.

The relationship of financial inclusion with poverty has been documented extensively and, on the whole, favourably. Cross-country evidence consistently links greater financial access to lower poverty (Kumar, 2023), and studies from Asia and other developing regions add that financial inclusion tends to unlock investment in education, healthcare, and entrepreneurship channels that feed into better long-run economic outcomes (Kadir et al., 2025; Khudoykulov et al., 2026).

Not every study agrees, however. Some research complicates the picture, suggesting financial inclusion by itself does not guarantee poverty reduction; its effectiveness hinges on factors like financial literacy, how products are designed, and the quality of surrounding institutions (Razzaq et al., 2024). There is even a cautionary thread here: in certain contexts, expanded credit access has tipped vulnerable households into over-indebtedness rather than relief.

A more recent strand of research treats financial inclusion not as an outcome in itself but as a mechanism through which financial services, insurance included, end up influencing poverty. Under this framing, participating in life insurance draws individuals closer to financial institutions, and that closer relationship then widens their access to other financial services.

Supporting this view, inclusive financial systems have been shown to build household resilience, support income generation, and lower vulnerability to economic shocks (Anifowose & Chummun, 2025). Rural-finance research goes a step further, indicating that financial inclusion actively mediates the link between financial-service access and improved household welfare (Li et al., 2025), which raises the possibility that life insurance's effect on poverty runs through both a direct path and an indirect one via financial inclusion.

The theoretical anchor for this study is financial inclusion theory, which centres on how financial systems drive economic growth and poverty reduction. Its core claim is that access to financial services pulls individuals into formal economic participation (King & Levine, 1993). Within that framework, insurance functions as one component of the broader financial system, reducing risk and uncertainty and, by extension, supporting household welfare and poverty reduction. The theory further suggests that access to a diverse mix of financial services builds household resilience and underpins sustainable economic development more broadly.

Returning to life insurance specifically, it protects against the risk of a breadwinner's death or other unexpected losses, which is precisely what keeps affected households from sliding further into poverty. Through compensation and income replacement, it lets families hold their consumption steady, keep their productive assets intact, and stabilize household income overall. In effect, insurance mechanisms serve a protective function, absorbing financial shocks and reinforcing economic security for households that would otherwise be highly exposed.

Empirical work reinforces this protective role. Insurance coverage has been linked to a lower likelihood of households falling into poverty traps triggered by catastrophic financial shocks (Henshaw et al., 2023), and life insurance products more broadly have been identified as instruments that strengthen social protection and economic stability in developing-economy contexts (Anifowose & Chummun, 2025). Taken together, this evidence base motivates the study's first hypothesis:

H1: Life insurance access and utilization exert a significant, positive influence on poverty reduction.

There is a second thread worth developing here: life insurance's role as a gateway into formal finance. Individuals who purchase policies typically end up interacting with financial institutions as a matter of course. That interaction tends to spill over into engagement with other services, such as savings accounts, digital payment tools, and credit facilities. The result is a natural pathway by which insurance participation strengthens financial inclusion overall.

Financial inclusion itself is generally defined as the availability and use of affordable financial services by individuals and businesses. Insurance access sits squarely within this definition, since it supplies risk-management tools and pulls people further into the formal financial sector. Evidence bears this out: micro-insurance and other inclusive insurance products have been shown to substantially widen financial inclusion by bringing low-income populations into formal financial systems (Anifowose & Chummun, 2025). This leads to the study's second hypothesis:

H2: Life insurance access and utilization exert a significant, positive influence on financial inclusion.

Financial inclusion, in turn, is commonly treated in the literature as a central driver of poverty reduction. When people can save securely, access credit for productive purposes, and manage risk through insurance or other financial tools, the downstream effects tend to include higher household income, greater entrepreneurial activity, and stronger economic resilience.

The empirical record generally supports a negative relationship between financial inclusion and poverty. Cross-country evidence links expanded financial access to higher household income and improved welfare, and multi-country research specifically finds that financial inclusion reduces extreme poverty by opening up savings, credit, and insurance access (Saha & Qin, 2022). Household-level studies point in the same direction, showing that financial inclusion cuts multidimensional poverty by enabling investment in education, health, and productive activities (Kadir et al., 2025; Tran et al., 2022). This body of evidence underpins the third hypothesis:

H3: Financial inclusion exerts a significant, positive influence on poverty reduction.

Beyond its direct effect, life insurance's influence on poverty may also travel an indirect route through financial inclusion. As households participate more in life insurance, their interaction with financial institutions typically grows, bringing greater access to savings accounts, credit, and digital payment systems. That expanded financial engagement can, in turn, improve how households manage their finances and the economic opportunities available to them, ultimately feeding into poverty reduction.

This mediating logic is supported in the broader literature: inclusive financial systems are understood to give households the tools needed to build resilience, generate income, and reduce exposure to financial shocks (Anifowose & Chummun, 2025). Research on rural inclusive finance adds further weight, showing that access to insurance and related financial services mediates the

relationship between financial access and improved household welfare (Li et al., 2025). Together, this evidence motivates the study's fourth and final hypothesis:

H4: Financial inclusion mediates the relationship between life insurance access and utilization, and poverty reduction.

Drawing on this literature review and the theoretical framework outlined above, the study advances a model in which life insurance shapes poverty reduction along two paths simultaneously: directly and indirectly through financial inclusion.

In doing so, this research contributes something the existing literature has largely lacked: a single analytical framework that brings life insurance, financial inclusion, and poverty reduction together, tested with empirical data from Karnali Province, a region that remains comparatively under-researched within Nepal.

Figure 1 lays out this conceptual framework, mapping the proposed relationships among life insurance access and utilization, financial inclusion, and poverty reduction. As the figure illustrates, the model treats insurance as a driver of poverty alleviation through both a direct channel and an indirect one that runs via financial inclusion.

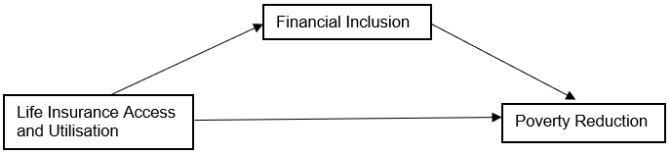

Figure 1: Conceptual Framework

Note. Adapted from Beck et al. (2007), Churchill and Matul (2012), and Demirgüç-Kunt et al. (2018).

Research Methods

To examine how life insurance access and utilization relate to financial inclusion and poverty reduction in Karnali Province, this study relied on a cross-sectional survey carried out within an explanatory research design. This design choice fit the study's aims well: testing hypothesized relationships and disentangling both direct and mediating effects among the constructs called for the kind of statistical rigor an explanatory approach provides (Hair et al., 2021).

Karnali Province was chosen deliberately, not incidentally. Among Nepal's provinces, it stands out for its combination of economic marginalization and geographic remoteness marked by low household income, weak financial infrastructure, thin banking presence, and constrained access to formal financial services (Government of Nepal, 2023). These are exactly the conditions under which the interplay between life insurance, financial inclusion, and poverty becomes most worth studying. The study drew its target population from households across both rural and urban municipalities in the province, restricting eligibility to individuals aged 18 or older who had at least some baseline familiarity or experience with financial and insurance services.

Given that not every household in the study area engaged meaningfully with formal financial services or insurance products, purposive sampling was the natural choice, as it let the study focus on respondents genuinely positioned to speak to life insurance participation and financial service usage, which strengthened the overall quality of the data collected. In total, 150 respondents took part. This sample size holds up well against SEM guidelines, which treat such sizes as appropriate for exploratory models involving mediation, particularly at the small-to-medium scale (Hair et al., 2021). It also clears the commonly cited "10-times rule" threshold, under which the sample should be at least ten times the largest number of structural paths pointing to any single latent construct (Hair et al., 2021).

Data collection took the form of face-to-face structured surveys conducted in December 2025. The questionnaire itself was originally drafted in English, then translated into Nepali so respondents could engage with it comfortably and answer accurately. Before any data was gathered, every participant was briefed on the study's purpose and asked to provide informed consent. Structurally, the questionnaire is split into two parts: demographic details (covering gender, age, education, occupation, income, family size, and residence) and the construct measurement items themselves.

Each construct was built from multi-item scales drawn from earlier empirical work and adapted to fit Nepal's context, with all items rated on a five-point Likert scale running from 1 (strongly disagree) to 5 (strongly agree). For life insurance access and utilization, the indicators covered insurance ownership, how policies were actually used, awareness of available insurance products, premium payment habits, and general engagement with insurance, all adapted from prior studies on insurance participation and financial protection (Beck & Webb, 2003; Churchill & Marisetty, 2020). Financial inclusion, meanwhile, was captured through indicators tied to bank account ownership, savings behaviour, credit access, and use of digital financial tools, with the scale itself adapted from established financial-inclusion frameworks (Demirgüç-Kunt et al., 2018; Sarma, 2008). Poverty reduction rounded out the measurement set, assessed via indicators of household economic well-being, income stability, capacity to meet basic needs, financial resilience, and perceived gains in living standards (Kadir et al., 2025; Saha & Qin, 2022).

Analysis proceeded through SmartPLS 3, following the standard PLS-SEM procedure in two distinct stages. The first stage centred on the measurement model, checking reliability and validity before moving forward. The second stage turned to the structural model, working through path coefficients, t-statistics, p-values, R^2 values, and f^2 effect sizes. Mediation was tested separately, using bootstrapping to estimate the indirect effect running from life insurance through financial inclusion to poverty reduction, a technique favoured in PLS-SEM precisely

because it delivers robust mediation estimates without requiring the data to meet normal-distribution assumptions (Hair et al., 2021).

On the ethics front, the study received formal approval from the Midwest University Research Ethics Committee before any fieldwork began. Every respondent participated voluntarily and gave informed consent prior to data collection. Confidentiality and anonymity were safeguarded throughout; findings were reported only in aggregate, and collected data were stored securely. Participants were also made aware that they could withdraw from the study at any point without facing any consequences, keeping the research aligned with standard ethical practice for social-science work involving human participants.

Results

Demographically, the 150 respondents surveyed across Karnali Province skewed male, at 63.3% of the sample, against 34% female and 2.7% identifying otherwise. Age-wise, the bulk of participants fell into the working-age bracket, with the 21–30 group representing the largest single share (33.3%), closely followed by the 31–40 bracket (29.3%).

Marriage was common among respondents; nearly four in five (79.3%) were married, and educational attainment clustered around the secondary level: 41.3% had completed higher secondary schooling, while another 26.0% had finished secondary education, together painting a picture of moderate educational attainment across the sample. Employment status told a more concerning story: unemployment topped the list at 38.7%, ahead of private-sector employment (28.7%) and agricultural work (16%). Income levels reinforced this picture of economic vulnerability, with more than half the sample (58%) earning under NPR 10,000 monthly.

Household composition leaned toward mid-sized families, with 72.7% living in households of four to six members, and just over half the sample (55.3%) residing in rural settings rather than urban ones. On the insurance front, coverage was roughly evenly split but leaned slightly toward non-coverage: 45.3% of respondents held life insurance, compared to 42.7% who did not, with the remaining 12.0% uncertain of their status.

Taken together, this profile of a largely young-to-middle-aged, married population with modest education, low household income, and mixed insurance coverage sets a meaningful backdrop for the study's central analysis: examining how life insurance, financial inclusion, and poverty reduction interact within Karnali Province's specific socioeconomic conditions.

Table 1. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Financial Inclusion	.950	.953	.956	.647
Life Insurance Access and Utilization	.968	.970	.972	.710
Poverty Reduction	.924	.941	.941	.727

Reliability and validity checks, summarized in Table 1, confirm that every construct in the model clears the required benchmarks. Internal consistency held up well across the board. Cronbach's Alpha, rho_A, and Composite Reliability all landed comfortably above the .70 threshold. Convergent validity followed the same pattern, with AVE values surpassing .50 for each construct. On the whole, these results establish the measurement model as sound, clearing the way for structural analysis to proceed.

Table 2. Outer Loadings

	Financial Inclusion	Life Insurance Access and Utilization	Poverty Reduction
FI1	.802		
FI10	.784		
FI11	.739		
FI12	.724		
FI2	.779		
FI3	.829		
FI4	.868		
FI5	.732		
FI6	.837		
FI7	.837		
FI8	.841		
FI9	.866		
LI10		.821	
LI11		.773	
LI12		.805	
LI13		.866	
LI14		.856	
LI15		.860	
LI2		.802	
LI3		.828	
LI4		.882	
LI5		.782	
LI6		.863	
LI7		.878	

LI8		.853	
LI9		.917	
PR1			.799
PR4			.919
PR5			.932
PR6			.803
PR8			.748
PR9			.898

As Table 2 illustrates, indicator loadings across all three constructs, financial inclusion, life insurance access and utilization, and poverty reduction, comfortably clear the .70 benchmark, spanning a range from .724 up to .932. Such consistently strong loadings point to a straightforward conclusion: each measurement item is doing its job, accurately capturing the construct it was designed to represent. Together, these results speak to a measurement model that fits the data well and holds up as valid.

Table 3. HTMT Values

	Financial Inclusion	Life Insurance Access and Utilization	Poverty Reduction
Financial Inclusion			
Life Insurance Access and Utilization	.670		
Poverty Reduction	.433	.613	

Discriminant validity was further assessed using the Heterotrait-Monotrait (HTMT) ratio, with results reported in Table 3. Across the three constructs, financial inclusion, life insurance access and utilization, and poverty reduction, the HTMT values fell between .433 and .670, staying well clear of the .85 cut-off typically used as the ceiling for acceptable discriminant validity.

These figures carry a clear implication: the constructs do not overlap conceptually but instead capture genuinely separate dimensions. With each construct confirmed as measuring something distinct, the measurement model earns its footing for the structural analysis that follows.

Table 4. Fornell-Larcker Criterion

	Financial Inclusion	Life Insurance Access and Utilization	Poverty Reduction
Financial Inclusion	.805		
Life Insurance Access and Utilization	.653	.843	
Poverty Reduction	.436	.600	.853

A second discriminant validity check came via the Fornell-Larcker criterion, summarized in Table 4. For all three constructs, the square root of AVE shown along the diagonal outpaced that construct's correlations with the other two: Financial Inclusion registered .805, Life Insurance Access and Utilization came in at .843, and Poverty Reduction reached .853. In each case, these diagonal values held the top spot compared to any cross-construct correlation, which is exactly the pattern the criterion calls for. The upshot is that the three constructs stand apart from one another empirically, giving the study's discriminant validity a second layer of confirmation.

Table 5. R Square, f Square, and Model Fit

	R Square	R Square Adjusted	
Financial Inclusion	.426	.422	
Poverty Reduction	.364	.355	
	Financial Inclusion	Life Insurance Access and Utilization	Poverty Reduction
Financial Inclusion			.005
Life Insurance Access and Utilization	.742		.273
Poverty Reduction			
	Saturated Model	Estimated Model	
SRMR	.101	.101	
d_ULS	5.388	5.388	
d_G	13.465	13.465	
Chi-Square	5113.964	5113.964	
NFI	.445	.445	

Turning to explanatory power, Table 5 indicates that the model accounts for a meaningful though not overwhelming share of variance in both financial inclusion and poverty reduction. Life insurance access and utilszation do the heavy lifting for financial inclusion, explaining it to a substantial degree. In contrast, its explanatory reach into poverty reduction, while still present, is more modest.

Looking at effect sizes tells a complementary story. Life insurance emerges as a strong predictor of financial inclusion and carries a moderate direct effect on poverty reduction in its own right. Financial inclusion, by contrast, barely registers as a driver of poverty reduction; its effect size here is negligible.

As for overall model fit, the picture is mixed but workable: SRMR sits just above the conventional benchmark, and NFI points to a respectable fit without being exceptional. None of this undermines the core findings; taken as a whole, the model still offers a useful window into how life insurance, financial inclusion, and poverty reduction relate to one another.

Table 6. Cross-validated Redundancy

Construct	SSO	SSE	Q^2 (=1-SSE/SSO)
Financial Inclusion	1800.0	1323.792	.265
Life Insurance Access and Utilization	2100.0	2100.0	
Poverty Reduction	900.0	676.497	.248

Predictive relevance was assessed through cross-validated redundancy (Q^2), and the results here are encouraging: both endogenous constructs clear the zero threshold that signals meaningful predictive power. Financial Inclusion posted a Q^2 of .265, while Poverty Reduction came in slightly lower at .248 (see Table 6), with positive values in both cases, which is what confirms the model's capacity to explain these outcomes within the Karnali Province context meaningfully. Life Insurance Access and Utilization, being an exogenous construct in the model, does not generate a Q^2 value of its own, which is expected given how the statistic is calculated. Taken together, though, the predictive relevance findings for financial inclusion and poverty reduction hold up well, reinforcing confidence in the model's overall explanatory strength.

Table 7. Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	t-value	p-value	Decision
FI -> PR	.077	.076	.123	.627	.531	Not Supported
LI -> FI	.653	.655	.048	13.706	.000	Supported
LI -> PR	.55	.55	.091	6.063	.000	Supported

The path coefficients reported in Table 7 tell a fairly clear story about which relationships in the model actually hold up statistically. Life insurance emerges as a powerful driver on two fronts: it significantly boosts financial inclusion ($\beta = .653$, $p < .001$) and directly strengthens poverty reduction ($\beta = .550$, $p < .001$). Practically speaking, this means households carrying life insurance are more likely to gain financial inclusion and see tangible improvements in their economic stability.

Financial inclusion's own link to poverty reduction tells a different story; however, the effect here falls short of significance ($\beta = .077$, $p = .531$). This null result carries an important implication: simply having access to financial services is not, on its own, sufficient to move the needle on poverty within Karnali Province's specific context. Put together, these results position life insurance as the study's central, direct lever for poverty reduction, a role that financial inclusion, on its own, does not manage to fill.

Table 8. Specific Indirect Effects

Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	t-value	p-value
LI -> FI -> PR	.050	.049	.081	.620	.535

Mediation results, reported in Table 8, close out the picture: the indirect path from life insurance to poverty reduction, running through financial inclusion, does not reach statistical significance ($\beta = .050$, $t = .620$, $p = .535$). In practical terms, this means financial inclusion is not functioning as a genuine mediating channel here, at least not within the specific socioeconomic conditions found in Karnali Province.

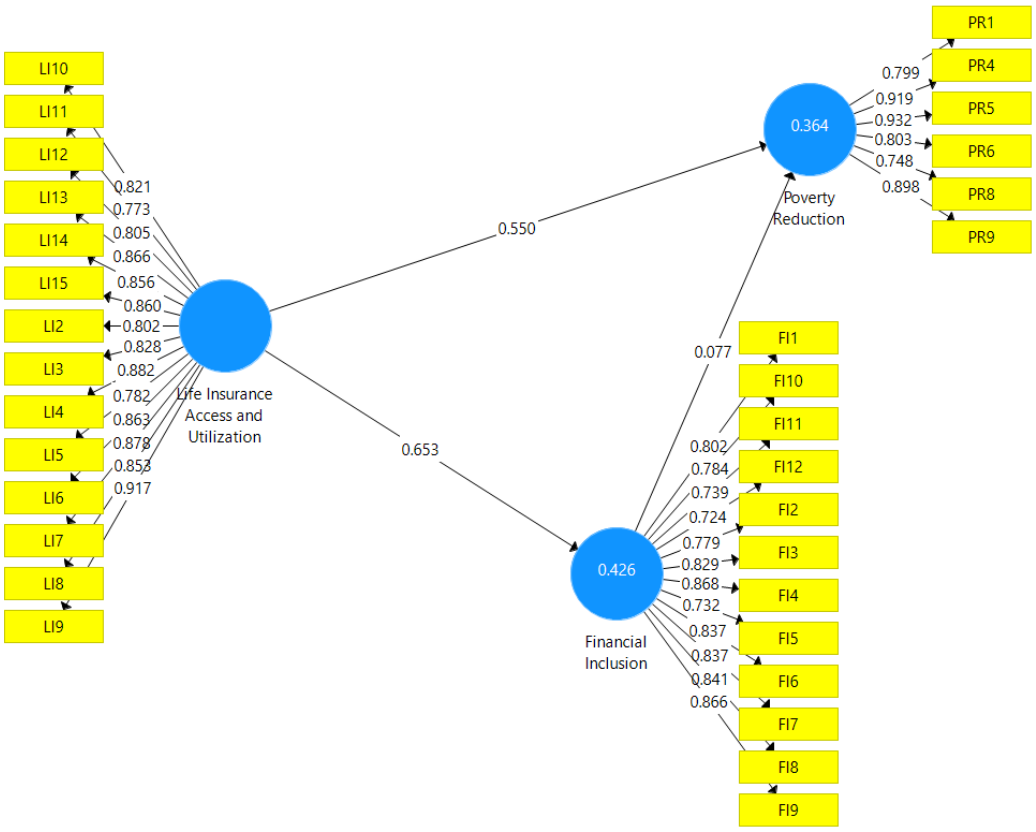

Figure 1: Conceptual Framework

Pulling the structural model results together, one pattern stands out clearly: life insurance access and utilization function as the model's central driver, shaping both financial inclusion and poverty reduction in meaningful ways. Its effect on financial inclusion is both strong and statistically robust (β = .653), and it also exerts a direct, positive pull on poverty reduction (β = .550). Financial inclusion, meanwhile, shows a positive relationship with poverty reduction too, but one that does not clear the bar for statistical significance (β = .077), pointing to a conclusion worth underscoring: on its own, financial inclusion is not enough to move poverty outcomes in this setting meaningfully.

In terms of overall explanatory power, the model accounts for 42.6% of the variance in financial inclusion and 36.4% in poverty reduction figures that, together, underscore how central life insurance is to strengthening households' financial security and broader economic well-being.

Discussion

Bringing together the relationships explored in this study- life insurance participation, financial inclusion, and poverty reduction in Karnali Province- the demographic backdrop proves worth revisiting. Respondents skewed young-to-middle-aged, married, moderately educated, and predominantly rural and low-income. That backdrop matters here: limited income security and constrained financial access are exactly the conditions that shape whether and how households take up insurance or engage with formal financial services in the first place.

Within the structural results, one finding dominates: life insurance sits at the centre of the model's explanatory power. Its effect on financial inclusion is strongly positive, and it also drives poverty reduction directly and significantly. Taken together, these findings suggest that households with life insurance are more likely to be integrated into formal financial systems and, consequently, experience greater economic stability. This lines up well with existing scholarship framing insurance as a financial-protection mechanism, one that helps households manage risk and steer clear of deeper economic vulnerability (Churchill & Marisetty, 2020).

Financial inclusion's relationship with poverty reduction, however, tells a different story; the effect does not reach statistical significance. That non-result carries weight: it suggests financial-service access, taken alone, is not sufficient to move poverty outcomes in this particular setting. One plausible reason is that many low-income households in the region may lack the income levels, financial literacy, or productive opportunities needed to turn financial-service access into real economic gain. This departs somewhat from earlier work reporting a more forceful role for financial inclusion in reducing poverty (Demirgüç-Kunt et al., 2018), a divergence that itself hints at how context-dependent financial inclusion's impact really is.

The mediation results add another layer to this picture: financial inclusion does not meaningfully carry the relationship between life insurance and poverty reduction. Put differently, even though life insurance and financial inclusion are conceptually linked, the data here suggest that gains in financial inclusion alone do not explain how life insurance ends up reducing poverty in this setting. This runs counter to research positioning financial inclusion as the key mechanism connecting financial services to improved household welfare (Anifowose & Chummun, 2025; Li et al., 2025). A more fitting interpretation may be that life insurance's protective functions, such as financial security, risk mitigation, and income stabilization, act on poverty more immediately and directly, without necessarily routing through broader financial-inclusion gains.

Taken as a whole, then, life insurance stands out as the model's primary driver, while financial inclusion on its own falls short of meaningfully reducing poverty in this context. These conclusions, though, need to be read against the socioeconomic backdrop of the study area, where constrained income and limited financial capacity likely blunt whatever poverty-reducing potential financial inclusion might otherwise carry.

Conclusion and Implications

Set in Karnali Province, Nepal, this research set out to understand how life insurance, financial inclusion, and poverty reduction connect. What emerged is a fairly clear signal: life insurance carries real weight, both in strengthening households' financial inclusion and in driving down poverty directly.

Financial inclusion's own contribution proved far more limited; it showed no significant standalone effect on poverty reduction, nor did it serve as a mediating link between life insurance and poverty outcomes. The implication here is straightforward: financial-service access, by itself, is not enough. Households also need sufficient income capacity and the practical ability to put those services to productive use. Given this, life insurance emerges as the study's principal engine for poverty reduction, with financial inclusion relegated to more of a supporting function.

Where this study adds genuine value to the existing literature is in demonstrating that, at least in low-income rural settings, life insurance's link to poverty reduction is more direct than financial inclusion. In doing so, it pushes back against the common assumption that financial inclusion automatically translates into lower poverty, and instead foregrounds financial-protection mechanisms as central to any poverty-reduction framework. It also points toward a broader takeaway: the financial inclusion–poverty relationship is not fixed; its strength and direction appear to shift depending on context.

Practically, these results point policymakers and financial institutions toward a clear priority: expand life insurance coverage, with particular urgency in rural, low-income areas. Financial inclusion still matters, to be clear, but its value only materializes fully when paired with financial-literacy training and genuine income-generating opportunities; without those, expanded access alone accomplishes little.

Affordability and awareness deserve emphasis, too. Life insurance schemes that are genuinely affordable, backed by outreach and awareness campaigns, can meaningfully strengthen household financial security and cushion families against unexpected shocks.

More broadly, life insurance belongs within the wider architecture of poverty-reduction and social-protection policy, not as an isolated financial product. Micro-life insurance in particular holds promise here by shielding vulnerable households from unforeseen setbacks like illness, disability, or lost income; it can meaningfully bolster financial resilience and prevent families from sliding deeper into poverty. In Karnali Province specifically, the evidence positions life insurance as a genuinely important poverty-reduction tool, while financial inclusion on its own falls short of producing a direct, significant effect. Getting the most out of insurance-based systems, though, will likely require pairing them with complementary economic and educational support; neither element working in isolation is likely to deliver the same results.

Looking ahead, future research would benefit from extending this analysis across multiple provinces or running comparative studies across varied geographic and socioeconomic contexts, both of which would strengthen how broadly these findings can be applied. There is also room to bring in additional contextual variables, such as digital financial services, household income levels, financial literacy, and government support programs, among them, to build a clearer, more granular understanding of exactly how life insurance translates into reduced poverty.

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Conflict of Interest

Authors declare that there is no conflict of interest.

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Data Availability Statement

The data supporting the study are available from the corresponding author upon reasonable request and subject to appropriate ethical and confidentiality considerations.

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