

Statistical Analysis for Eradicating the Risk of Poverty: Insights from Student Perspectives at the University of Peshawar

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This study analyzed the opinions of Bachelor of Science students at the University of Peshawar on poverty alleviation, using statistical techniques such as frequency distribution, Chi-square tests, odds ratios, and logistic regression. A sample of 490 respondents was selected using the Krejcie & Morgan formula, with a detailed gender distribution analysis. Statistical tests highlighted significant differences in poverty awareness and knowledge, and logistic regression identified key predictor variables. The model's fit was evaluated using metrics like -2 Log Likelihood and R-squared, with a stepwise approach to refine the model by adding or removing variables to ensure accuracy and avoid overfitting.

Keywords: *Poverty Eradication, Frequency Distribution, Bar Chart, Pie Chart, Association, Central Tendency as Mode, Chi-Square, Odd Ratio, Relative Risk, Logistic Risk.*

1. Introduction

The role of statistics is fundamental across various disciplines, including the natural environment and socio-economic fields. In the context of poverty eradication, a key socio-economic issue, statistics help analyze and understand the dynamics at play. Today, poverty remains a major challenge globally, especially in regions with political instability and limited economic opportunities. In countries like Pakistan, socio-economic challenges such as poverty, unemployment, inflation, and poor health conditions are widespread, similar to other developing nations. Education is considered one of the most effective tools to address these issues, as it has a far-reaching impact on all aspects of human life. Theories of endogenous growth emphasize education as a significant driver of economic development (Lucas, 1988). In response to this, many developing nations prioritize education policy and align their systems with market demands. As noted by Jackson and George (1975), "Access to higher education is a critical issue for state and federal policymakers." This highlights the crucial role education plays in shaping socio-economic policies aimed at reducing poverty and promoting long-term economic growth [1,2].

Pakistan's literacy rate stands at 57%, with a gender disparity of 45% for women and 69% for men, according to the Economic Survey of Pakistan 2009-10. The country ranks 136th globally on the Human Development Index (HDI), with a low score of 0.551 (UNDP, 2008). Despite these challenges, higher education in Pakistan has seen significant growth, particularly through universities, which are key to advancing education. In recognition of the importance of higher education for research and economic development, the government replaced the University Grants Commission (UGC) with the Higher Education Commission (HEC) in 2002 to strengthen this sector [3].

When Pakistan was established in 1947, the country had very low educational levels. Although education has not always been a top priority, the government has made efforts to improve the sector. During the 1990s, both public and private sectors expanded the network of educational institutions across the country. The establishment of the Higher Education Commission (HEC) marked a significant transformation, leading to rapid growth in higher education, which had previously progressed slowly until the late 1990s. Currently, Pakistan has 128 universities, with 56 in the private sector and 72 public institutions offering higher education [4].

1.1 Affected by Poverty

Poverty exacerbates several critical issues in America, such as crime, healthcare access, racial inequality, and workforce productivity. By allowing poverty to persist, society ultimately bears a significant cost. The Children's Defense Fund report highlights the severe consequences of childhood poverty, which extend beyond childhood and affect society as a whole. Businesses struggle to find skilled workers, healthcare costs rise due to preventable illnesses, and educational

systems are burdened with additional support needs. Communities feel less secure, while governments spend more on prisons, homelessness, and judicial processes. Taxpayers end up covering the costs for problems that could have been avoided, and even emergency services are overburdened. These challenges impact national security and public safety, making poverty a threat to the overall well-being of the country [5].

In a news release dated June 25, 2012, the Human Rights Commission of Pakistan (HRCP) highlighted that bonded labor remains a sensitive issue in the country. Despite being outlawed for two decades, it continues to manifest in various forms. The HRCP emphasized the need for the state and civil society to intensify their efforts to combat this problem. The release followed discussions with stakeholders at a workshop organized by the HRCP [6].

1.2 Energy System Improvements

The power sector faces several significant challenges, including pricing issues, low revenue collection, poorly targeted subsidies, management and institutional inefficiencies, and inefficient energy production and distribution. The government is working on a new electricity policy to address these concerns, which will significantly update the existing policy from July 2013. Additionally, efforts are being made to enhance the renewable energy policy to better assess and define the contributions of alternative energy sources to the national grid. According to a report from the International Growth Centre, Khyber Pakhtunkhwa has identified four priority growth sectors: manufacturing, agriculture and livestock, mineral extraction, and tourism. However, there is limited data on women's participation across these sectors. Women predominantly engage in agriculture and livestock, typically dedicating 6 to 7 hours daily to these activities. Beyond agriculture, there are also promising job opportunities for women in food processing, pharmaceuticals, and textiles, where they often work in small to medium-sized enterprises, focusing on tasks such as stitching, needlework, and embroidery [7].

1.3 Poverty eradication is important

In addition to increasing the rates of heart disease, diabetes, hypertension, cancer, infant mortality, mental illness, undernutrition, lead poisoning, asthma, and dental problems, poverty is associated with various other health risks. This connection is crucial, as poverty imposes a significant burden on those trapped in its cycle. One of the most consistent findings in epidemiology is that an individual's health is profoundly affected by lower socioeconomic status, particularly poverty

1.4 Average lifespan due to poverty

Consequently, individuals living in poverty have a notably shorter life expectancy, with their mortality rate nearly three times higher than that of wealthier peers in the same age group. For example, those in the top 5% of the economic ladder can expect to live about nine years longer

than individuals in the bottom 10%. Health expert Nancy Leidenfrost reviewed existing research and found that significant health disparities between the impoverished and those with higher incomes are prevalent across all health metrics. However, it's important to recognize that poverty adversely affects not only those directly experiencing it but also has broader social, psychological, and economic repercussions. These overlooked costs impact us individually and collectively as a nation [8].

2. Literature Review

The study indicates that several key factors affect the demand for higher education in Khyber Pakhtunkhwa, including the student's age, marital status, access to higher education institutions, parental education, family income, and awareness of the benefits of higher education. Notably, 80% of students believe that higher education could help eradicate poverty, while 93% feel it could address broader socioeconomic issues in society. The study highlights several key factors affecting the demand for higher education in Khyber Pakhtunkhwa, including the student's age, marital status, access to higher education institutions, parental education, family income, and awareness of the benefits of higher education. Notably, 80% of students believe that higher education can help eradicate poverty, while 93% think it can address broader socioeconomic issues. Based on these findings, it is recommended that public investment in higher education be increased, alongside a significant awareness campaign about its importance. Strengthening the connection between higher education and labor market demands is expected to enhance employment opportunities, encouraging more individuals to pursue higher education [8].

The study conducted in Peshawar in 2010 assessed the impact of remittance inflows on household welfare, measured through household consumption expenditures. Using a combination of simple and snowball sampling, 60 households were interviewed. A regression model analyzed the relationships, incorporating control variables such as education, age, and family size. The findings indicated that receiving remittances positively affects household welfare, with all control variables showing beneficial effects. No significant econometric issues were found, and the results were statistically significant. The study recommends that the Pakistani government promote labor export to enhance household prosperity and reduce local unemployment. Research suggests that Pakistan can adopt strategies from China's approach to poverty reduction. Islamabad could implement a modified version of this framework to minimize losses and maximize benefits. This cooperation is framed within a system of institutions that embody a shared ideology. The study identifies three types of poverty in Pakistan: universal, socio-cultural, and structurally induced poverty. It argues that while President Xi's policies may not be directly effective in Pakistan, combining need-based eradication techniques from him and former leader Deng Xiaoping could yield significant benefits. With 17 active major and minor ports in the nearby Indian state of Gujarat, Pakistan is urged to learn from past mistakes, develop new ports, and invest in grassroots

welfare initiatives. A combined bottom-up and top-down approach is recommended to navigate the current recession and alleviate poverty effectively. Pakistan faces significant challenges, including a shortage of skilled workers and the outflow of talent, particularly in the context of the China-Pakistan Economic Corridor (CPEC). CPEC is not just about infrastructure but also involves preparing the workforce for substantial Chinese investment and skilled labor integration. The lack of educated women in the workforce exacerbates this issue, highlighting the need for a comprehensive human resource development policy for women. Research indicates that educated women require training and knowledge about CPEC from various perspectives to positively influence the project's sustainability and social outcomes [9].

The discussion around comparing targeted poverty reduction with broader eradication strategies has gained attention. The program utilizes practical and scientific methods to implement specific support measures aimed at addressing the poverty conditions of various landowners and rural areas in Pakistan, allowing for precise control over poverty alleviation efforts. This targeted approach enhances the accuracy of poverty reduction initiatives. The study highlights the importance of examining multiple dimensions in understanding complex poverty data, with findings suggesting that this approach effectively addresses the diverse challenges of multidimensional poverty alleviation planning [10].

The study emphasized that successful growth must ensure equitable distribution of its benefits. They argue that improvement and equal opportunity are crucial for sustainable development; without them, individuals may remain trapped in poverty. This perspective shifts the focus of economic growth from mere increases in products, services, and individual income to enhancing the overall quality of life. Similarly, Aziz (2005) noted that income inequality can be addressed through strategic spending and reallocating public resources to enhance access to healthcare, education, and essential services for the population [11].

2.1 Aim and Objectives

This study aims to explore the phenomena of poverty eradication in the district Peshawar. The specific objectives of the study are;

- To identify the significant factors affecting Poverty Eradication
- To test the strength of the relationship between the qualitative variables
- To provide guidelines to policymakers regarding Poverty Eradication

I achieved my above three objectives through analysis which are given in the below step by step processing.

3. Methodology

3.1 Population of Interest

This research study focuses on the entire population of Bachelor of Science (BS) students at the University of Peshawar. By selecting this specific group, the study aims to gather insights and data that reflect the perspectives, experiences, and challenges faced by these students. The decision to concentrate on BS students allows for a comprehensive understanding of their academic environment, socio-economic backgrounds, and attitudes toward various issues pertinent to their educational journey. Through this approach, the research seeks to contribute valuable findings that can inform policies and practices within the university and potentially enhance the educational experience for future students.

3.2 SAMPLE SIZE

Determine the appropriate sample size for this study, the Krejcie and Morgan formula will be applied. This formula is widely recognized for its effectiveness in calculating sample sizes for surveys and research studies, based on the total population size and the desired level of confidence. The formula can be expressed as follows:

$$S = \frac{X^2 NP(1 - p)}{1 + X^2 P(1 - p)} + d^2(N - 1)$$

Where S represents the sample size, while X^2 is the chi-square value for 1 degree of freedom at a confidence level of 3.841. The total population size, N, refers to the number of BS students at the University of Peshawar. The population proportion, P is assumed to be 50% (0.5) to maximize the sample size.

3.3 Statistical Methods

To achieve the objectives of this study, statistical tools such as frequency distribution, measures of central tendency, and the logistic regression model will be employed. These tests aim to provide evidence regarding the effectiveness of certain interventions or strategies. These are common examples of statistical analyses often used in efforts to address poverty. Additionally, this process is a standard approach to assessing the strength of relationships between qualitative variables, utilizing methods like odds ratios and the chi-square test.

3.4 Data Analysis

To analyze the relationship between variables like elimination of economic hardship and education levels, we use a contingency table to display the frequency of each combination. This helps identify patterns between categories. The odds ratio is then calculated to measure the strength and direction

of the relationship, comparing the odds of economic hardship eradication between different education groups, offering insight into how education affects economic outcomes.

3.5 Chi-Square Distribution

The Chi-Square Distribution has wide ranged application in statistics. It is useful in situation in which the nature of variables is categorical. It is used to analyze the cross tabulations which is used to test of independence. The distribution has only one parameter which is called the degrees of freedom. The general form of Chi-Square Distribution of test statistic is relatively straight forward is given by

$$\chi^2 = \sum \left(\frac{O_i - e_i}{e_i} \right)^2$$

Where O_i is the observed value and e_i is the expected value in the above equation.

3.6 Odds Ratio

It is a Statistical method which is defined as the ratio of the two odds of an event of occurring in one group to the odds of its incidence in second group. It gives the strength of purpose association between the exposure variable and poverty outcomes, from a comparative study. The odds ratio can be used case-control study. An advantage the odds ratio is that it does not depend on whether we are interested in occurrence of an event or its non-occurrence.

$$\text{Odds Ratio} = \frac{P}{1 - P}$$

Where P is the probability of occurrence of an event and 1-P is the probability of non-occurrence of an event.

3.7 Logistic Regression

It is a Statistical method which is used to analyze the data in which the dependent is a dichotomous variable (binary variable). In our case the value “1” is assigned for the case and “0” is assigned for the control. Logistic regression model is used to determine the best model which describes the relationship between explanatory variables and predator variable [12]. Logistic regression performs standard errors, coefficients and their significance level to forecast a alter in the logit model of interest. A general form of Logistic Regression is given by:

$$Y = \beta_0 + \beta_1 X_1 + \dots + \beta_k X_k$$

where each X_i is a predictor and each B_i are the regression coefficient [17].

3.8 Stepwise Method

In stepwise selection, a primary model is refined by adding or removing terms to achieve the best fit. There are three main approaches: Forward Selection, Backward Elimination, and the Mixed

Method. In Forward Selection, the process starts with the smallest model, adding the most significant terms until no further improvements occur. Backward Elimination begins with a full model and removes terms that do not improve fit. The Mixed Method involves both adding and removing terms to optimize the model. These methods, originally proposed by Goodman in 1971, are often used in multiple regression [13].

3.9 Statistical Analysis

The purpose of this research was to identify the risk factors associated with poverty eradication (PE). To achieve this, students from various departments of Peshawar University were grouped, and I visited different departments to collect their opinions on poverty eradication. The study is structured into two sections: the first focuses on a primary analysis of the gathered data, while the second involves a statistical analysis. Each section provides valuable insights, helping us better understand students' perspectives and offering guidance on improving social conditions.

Table: 1

Gender	Frequency	Percent
Male	283	57.8
Female	207	42.2
Total	490	100.0

The table-1 shows the gender distribution of the 490 respondents in the study. Out of the total sample, 283 participants, or 57.8%, were male, while 207 participants, or 42.2%, were female. This indicates that the sample has a higher proportion of male respondents compared to female respondents. Overall, the data reflects the gender composition of the surveyed population, with males making up a larger portion of the total sample.

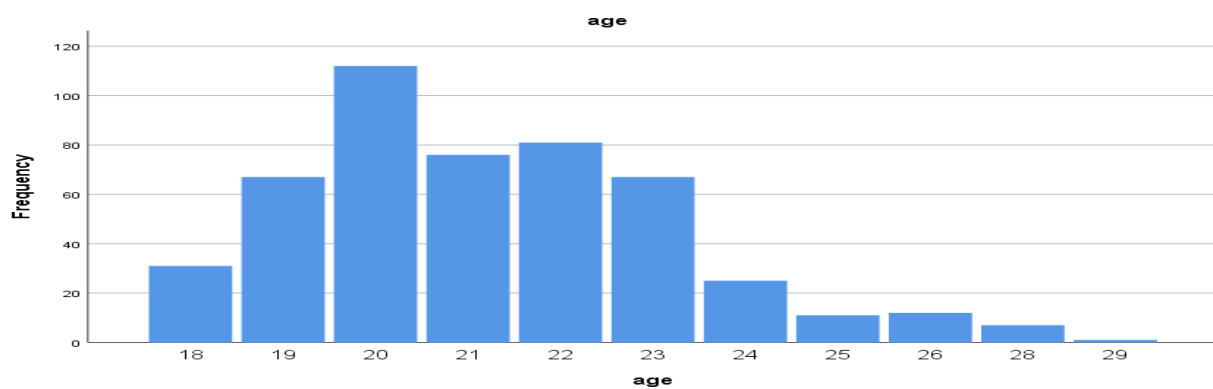


Figure-1: Age Distribution of BS Students at Peshawar University

3.10 Perception of Poverty

The given below table-2 shows the frequency distribution of responses regarding the perception of poverty. Out of 490 respondents, 478 (97.6%) believe in a specific meaning of poverty, while only 12 (2.4%) do not. This indicates a strong consensus among the respondents regarding the existence or understanding of poverty.

Table-2: Perception of Poverty

Valid	Frequency	Percent
No	12	2.4
Yes	478	97.6
Total	490	100.0

3.11 Public Perception of Government Poverty Reduction Initiatives

The frequency distribution given below in table-3 highlights respondents' views on government poverty reduction efforts, with Income and Employment Support (24.7%) and Education/Training (22.7%) receiving the most recognition as key initiatives. Transportation (16.1%) and Health (13.5%) are also acknowledged, indicating their importance in addressing poverty. However, Housing (7.1%) is viewed as less prioritized, and Awareness and Collaboration (5.5%) suggests a need for better stakeholder engagement. Notably, 10.4% of respondents felt that these efforts were not applicable to them, indicating a potential gap between policies and community needs.

Table-3

Valid	Frequency	Percent
Transportation	79	16.1
Education/Training	111	22.7
Housing	35	7.1
Income and employment support	124	24.7
Health	66	13.5
Awareness and collaboration	27	5.5
Not Applicable.	48	10.4
Total	490	100.0

3.12 Association Between Poverty Eradication and Family Impact

The table-4 presents the results of a Chi-square test conducted to assess the association between poverty eradication and the impact of poverty on families. The Pearson Chi-Square value is 5.150 with a significance level (p-value) of 0.023, indicating a statistically significant relationship between the two variables at the 5% significance level. The Likelihood Ratio also supports this finding with a value of 4.793 and a significance of 0.029. Additionally, Fisher's Exact Test shows a significance of 0.041, further confirming the association. The continuity correction indicates a slightly higher p-value of 0.073, suggesting that the relationship may not be as strong when adjusted for continuity. Overall, the results suggest that there is a meaningful association between poverty eradication efforts and the number of families affected by poverty.

Table-4

	Value	df	Significance (2-sided)	Sig. (2-sided)	Sig. (1-sided)
Pearson Chi-Square	5.150 ^a	1	.023		
Continuity Correction^s	3.204	1	.073		
Likelihood Ratio	4.793	1	.029		
Fisher's Exact Test				.041	.041
Linear-by-Linear Association	5.139	1	.023		
N of Valid Cases	490				

3.13 Risk Estimate

The table-5 shows the odds ratio for the meaning of poverty indicates that respondents who affirmatively define poverty (yes) are about 8.44 times more likely to have a certain outcome compared to those who do not, although the confidence interval (0.935 to 76.102) suggests considerable uncertainty in this estimate. For the cohort indicating that poverty affects them and their family slightly, the odds ratio of 2.49 implies a significantly higher likelihood of a positive outcome compared to those unaffected, with a confidence interval of 1.58 to 3.93 indicating strong statistical significance. Conversely, for those who feel poverty affects them greatly, the odds ratio of 0.30 suggests a lower likelihood of the positive outcome, but the wide confidence interval (0.051 to 1.70) indicates uncertainty and a lack of statistical significance. Overall, these results highlight varying impacts of perceived poverty on outcomes among different cohorts.

Table-5

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for meaning of poverty? (no / yes)	8.436	.935	76.102
For cohort poverty affect you and your family? = Slightly	2.487	1.575	3.928
For cohort poverty affect you and your family? = greatly	.295	.051	1.704
N of Valid Cases	490		

3.14 Model Fit and Variance Explanation Across Steps

The table-6 presents the model's goodness-of-fit and variance explained at each step of the logistic regression analysis. As the steps progress from 1 to 9, the -2 Log Likelihood increases slightly, indicating a gradual reduction in model fit. Similarly, both the Cox & Snell R Square and the Nagelkerke R Square values, which represent the proportion of variance in the dependent variable explained by the model, show a slight decline. The Cox & Snell R Square decreases from 0.138 to 0.129, while the Nagelkerke R Square drops from 0.199 to 0.185, suggesting a minor reduction in the model's explanatory power as the analysis progresses.

Table-6

Step	-2 log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	348.841 ^a	.138	.199
2	348.842 ^a	.138	.199
3	348.997 ^a	.138	.199
4	349.182 ^a	.137	.198
5	349.467 ^a	.137	.197
6	349.776 ^a	.136	.196
7	350.421 ^a	.134	.193
8	351.256 ^a	.132	.190
9	352.596 ^a	.129	.185

3.14 Logistic Regression Results Summary

The logistic regression model analyzes several variables related to poverty and their impact on the dependent variable. Significant predictors include "The meaning of poverty," which consistently shows a strong positive association with the outcome across all steps ($\text{Exp}(B) = 25.04\text{--}28.70$, $p < 0.01$), indicating a substantial increase in odds when the meaning of poverty is defined. Other important factors include "Household accommodation" ($\text{Exp}(B) = 1.28$, $p < 0.05$) and "Lower income into a region," which is negatively associated ($\text{Exp}(B) = 0.74\text{--}0.76$, $p < 0.05$), suggesting lower odds when income decreases in a region. "Guardian's unemployment at present" consistently shows a significant negative association ($\text{Exp}(B) \approx 0.76$, $p < 0.001$), indicating reduced odds of the outcome when a guardian is unemployed. Satisfaction with life also shows a significant positive association in the later steps ($\text{Exp}(B) = 1.25\text{--}1.29$, $p < 0.05$). Overall, key factors like poverty perception, accommodation, and unemployment strongly influence the model.

		B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	Reducing poverty.	.034	.070	.240	1	.624	1.035	.902	1.187
	Meaning of poverty.	3.261	1.260	6.698	1	.010	26.071	2.207	308.035
	Best program by govt.	-.002	.071	.001	1	.980	.998	.868	1.148
	Poverty reduction in province.	-.151	.085	3.111	1	.078	.860	.728	1.017
	Poverty reduction rural areas.	.045	.079	.321	1	.571	1.046	.896	1.220
	Household accommodation.	.254	.103	6.027	1	.014	1.289	1.052	1.578
	Basic-needs income level.	-.049	.124	.155	1	.693	.952	.747	1.215
	Lower income into a region.	-.276	.136	4.119	1	.042	.759	.581	.991

	Satisfaction.	.225	.114	3.905	1	.048	1.252	1.002	1.565
	Guadian's unemployment pres.*	-.277	.081	11.744	1	.001	.758	.647	.888
	Poverty free household.	-.038	.097	.156	1	.693	.962	.795	1.165
	Far above or below that level.	.064	.086	.554	1	.457	1.066	.901	1.262
	Poverty eradicated.	-.508	.278	3.341	1	.068	.601	.349	1.037
	Kind of income you receive.	-.121	.086	1.958	1	.162	.886	.748	1.050
	You unemployment at pres.*	.080	.075	1.132	1	.287	1.083	.935	1.254
	Constant	-.9052	1.442	.394	1	.530	.405		
Step 2 ^a	Reducing poverty costs.	.034	.070	.239	1	.625	1.035	.902	1.186
	The meaning of poverty.	3.263	1.258	6.723	1	.010	26.118	2.218	307.623
	Poverty reduction in province.	-.151	.085	3.112	1	.078	.860	.728	1.017
	Poverty reduction rural areas.	.045	.079	.323	1	.570	1.046	.896	1.220
	Household accommodation.	.254	.103	6.069	1	.014	1.289	1.053	1.577
	Basic-needs income level.	-.049	.124	.155	1	.694	.952	.747	1.215
	Lower income into a region.	-.276	.136	4.121	1	.042	.759	.582	.991
	Satisfaction.	.225	.114	3.905	1	.048	1.252	1.002	1.565
	Guadian's unemployment pres.*	-.277	.081	11.825	1	.001	.758	.647	.888
	Poverty free household.	-.039	.097	.158	1	.691	.962	.795	1.164

	Far above or below that level.	.064	.086	.555	1	.456	1.066	.901	1.261
	Poverty eradicated.	-.508	.277	3.353	1	.067	.602	.349	1.036
	Kind of income you receive.	-.121	.086	1.960	1	.161	.886	.748	1.049
	You unemployment at pres.*	.079	.075	1.134	1	.287	1.083	.935	1.253
	Constant	-.912	1.415	.415	1	.519	.402		
Step 3 ^a	Reducing poverty costs.	.035	.070	.257	1	.612	1.036	.904	1.188
	The meaning of poverty.	3.271	1.257	6.773	1	.009	26.325	2.242	309.080
	Poverty reduction in province.	-.152	.085	3.187	1	.074	.859	.727	1.015
	Poverty reduction rural areas.	.043	.079	.296	1	.587	1.044	.895	1.217
	Household accommodation.	.251	.103	5.951	1	.015	1.285	1.051	1.572
	Lower income into a region.	-.280	.136	4.247	1	.039	.756	.579	.986
	Satisfaction.	.223	.114	3.845	1	.050	1.249	1.000	1.561
	Guadian's unemployment pres.*	-.276	.080	11.740	1	.001	.759	.648	.889
	Poverty free household.	-.042	.097	.185	1	.667	.959	.794	1.160
	Far above or below that level.	.063	.086	.546	1	.460	1.065	.901	1.260
	Poverty eradicated.	-.505	.277	3.318	1	.069	.604	.351	1.039
	Kind of income you receive.	-.126	.085	2.181	1	.140	.882	.746	1.042
	You unemployment at pres.*	.078	.074	1.108	1	.293	1.081	.935	1.251

	Constant	-.971	1.407	.477	1	.490	.379		
Step 4 ^a	Reducing poverty costs.	.037	.070	.284	1	.594	1.038	.905	1.190
	The meaning of poverty.	3.275	1.250	6.870	1	.009	26.452	2.284	306.290
	Poverty reduction in province.	-.155	.085	3.324	1	.068	.856	.725	1.012
	Poverty reduction rural areas.	.045	.078	.331	1	.565	1.046	.897	1.220
	Household accommodation.	.248	.103	5.848	1	.016	1.282	1.048	1.568
	Lower income into a region.	-.283	.136	4.328	1	.037	.754	.577	.984
	Satisfaction.	.223	.114	3.857	1	.050	1.250	1.000	1.562
	Guadian's unemployment pres.*	-.284	.078	13.235	1	.000	.753	.646	.877
	Far above or below that level.	.061	.085	.515	1	.473	1.063	.899	1.257
	Poverty Eradicated	-.509	.277	3.374	1	.066	.601	.349	1.035
	Kind of incomes.	-.127	.085	2.215	1	.137	.881	.745	1.041
	You unemployment at pres.*	.078	.074	1.090	1	.296	1.081	.934	1.250
	Constant	-	1.064	.594	1	.441	.344		
Step 5 ^a	The meaning of poverty.	3.313	1.248	7.048	1	.008	27.470	2.380	317.067
	Poverty reduction in province.	-.154	.085	3.280	1	.070	.857	.726	1.013
	Poverty reduction rural areas.	.043	.078	.308	1	.579	1.044	.896	1.217
	Household accommodation.	.247	.102	5.815	1	.016	1.280	1.047	1.564

	Lower income into a region.	-.290	.136	4.568	1	.033	.748	.574	.976
	Satisfaction.	.227	.113	3.999	1	.046	1.255	1.005	1.567
	Guadian's unemployment pres.*	-.275	.076	13.120	1	.000	.760	.655	.881
	Far above or below that level.	.061	.085	.514	1	.473	1.063	.899	1.257
	Poverty Eradicated	-.498	.276	3.258	1	.071	.607	.354	1.044
	Kind of incomes.	-.126	.085	2.200	1	.138	.881	.746	1.041
	You unemployment at pres.*	.075	.074	1.016	1	.313	1.078	.932	1.246
	Constant	-.991	1.378	.518	1	.472	.371		
Step 6 ^a	The meaning of poverty.	3.365	1.259	7.149	1	.007	28.946	2.456	341.172
	Poverty reduction in province.	-.154	.085	3.268	1	.071	.857	.726	1.013
	Household accommodation.	.249	.102	5.894	1	.015	1.282	1.049	1.567
	Lower income into a region.	-.288	.136	4.529	1	.033	.749	.575	.977
	Satisfaction.	.222	.113	3.853	1	.050	1.249	1.000	1.559
	Guadian's unemployment pres.*	-.273	.076	12.939	1	.000	.761	.656	.883
	Far above or below that level.	.068	.085	.641	1	.423	1.070	.907	1.263
	Poverty Eradicated	-.491	.276	3.172	1	.075	.612	.356	1.051
	Kind of incomes.	-.125	.085	2.140	1	.143	.883	.747	1.043
	You unemployment at pres.*	.073	.074	.970	1	.325	1.076	.930	1.244

	Constant	-912	1.38	.436	1	.50	.402		
			0			9			
Step 7 ^a	The meaning of poverty.	3.35	1.24	7.25	1	.00	28.69	2.493	330.42
		7	7	0		7	9		5
	Poverty reduction in province.	-.153	.085	3.22	1	.07	.858	.727	1.014
				5		3			
	Household accommodation.	.252	.102	6.08	1	.01	1.286	1.053	1.571
				7		4			
	Lower income into a region.	-.286	.135	4.46	1	.03	.752	.577	.979
				8		5			
	Satisfaction.	.234	.112	4.35	1	.03	1.264	1.014	1.574
				9		7			
	Guadian's unemployment pres.*	-.265	.075	12.5	1	.00	.767	.663	.889
				35		0			
	Poverty Eradicated	-.479	.275	3.03	1	.08	.619	.361	1.062
				4		2			
	Kind of incomes.	-.119	.085	1.97	1	.16	.888	.752	1.048
				1		0			
	You unemployment at pres.*	.067	.074	.829	1	.36	1.069	.926	1.235
						3			
	Constant	-.774	1.36	.324	1	.56	.461		
			0			9			
Step 8 ^a	The meaning of poverty.	3.25	1.22	7.05	1	.00	25.93	2.349	286.42
		6	5	8		8	6		3
	Poverty reduction in province.	-.153	.085	3.24	1	.07	.858	.727	1.014
				2		2			
	Household accommodation.	.247	.102	5.91	1	.01	1.281	1.049	1.563
				6		5			
	Lower income into a region.	-.281	.135	4.35	1	.03	.755	.580	.983
				2		7			
	Satisfaction.	.241	.112	4.68	1	.03	1.273	1.023	1.584
				6		0			
	Guadian's unemployment pres.*	-.269	.074	13.0	1	.00	.764	.660	.884
				21		0			
	Poverty Eradicated	-.512	.272	3.53	1	.06	.599	.352	1.022
				6		0			

Kind of incomes.		-.091	.078	1.35	1	.24	.913	.784	1.064
				2		5			
Constant		-.456	1.30	.123	1	.72	.634		
			3			6			
Step	The meaning of poverty.	3.22	1.20	7.18	1	.00	25.04	2.376	264.00
9 ^a		1	2	3		7	4		4

4. Conclusion

This study explored the main factors influencing efforts to reduce poverty using logistic regression analysis. The results reveal that how people perceive poverty is a key factor, having a significant and positive impact on the likelihood of reducing poverty. Other important factors include household living conditions and regional income levels. Lower regional income was linked to higher poverty rates, while improved housing conditions increased the chances of reducing poverty. Additionally, unemployment of a household's guardian was found to substantially reduce the likelihood of escaping poverty, emphasizing the importance of employment for family welfare. Life satisfaction also played an important role, showing that how satisfied individuals feel is connected to poverty outcomes. The study emphasizes the need to address both material factors like income and housing, as well as personal perceptions of poverty and life satisfaction, when creating effective poverty reduction policies. Strategies that focus on creating jobs, improving living conditions, and reshaping public views on poverty are likely to have a greater impact in reducing poverty in the region.

The analysis and tables provide a comprehensive look at how respondents are distributed across demographic groups, binary responses, and multiple-choice questions, revealing clear data patterns. The logistic regression models highlight the connections between different predictors, such as poverty awareness, and the outcomes. Key statistics like p-values and odds ratios help clarify the importance and strength of these factors, showing which ones have the most significant influence. The stepwise regression method, used to add or remove variables, ensures that only the most relevant factors are kept in the final model. Metrics such as the Wald statistic and standard errors further ensure the reliability of the findings. Interpreting these results carefully is crucial to ensuring they align with the research objectives and the study's context. This thorough statistical analysis is essential for making informed, data-driven decisions, as it highlights the critical role each variable play in influencing poverty outcomes while also verifying the strength of the model.

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