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A Statistical Study on the Need for Insurance Coverage and Other Welfare Schemes for Autorickshaw Drivers in Indore City

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ABSTRACT

Introduction: Autorickshaw drivers are the one who make our journey safe and secure. Because of them we can travel from one place to another easily and safely. But the life of auto drivers is not as easy as they are exposed to very hot or cold temperature while working outside. Autorickshaw drivers undergo significant workload due to uncontrolled traffic and uneven time schedule.

Objectives: To know about the various types of addictions, living conditions and to give suggestions for the improvement of the conditions of auto rickshaw drivers in Indore city.

Material and Method: For this data has been collected from 110 respondents who comprised the auto rickshaw drivers and data has been analysed with the help of Standard Normal, chi square and Kolmogorov-Smirnov one sample tests. The data was collected through self-structured close ended questionnaire.

Results: The findings of the study show that education and awareness programs have significant relationship with having accidental insurance and more than 40% of the respondents are tobacco eaters. This study will help the government and insurance company to make them aware of insurance and ill effects of addiction of alcohol, tobacco and smoking. It will help in improving the condition of auto rickshaw drivers. Government and insurance companies together can make the policy to educate the uninsured auto drivers.

1. Introduction

Autorickshaw is a vehicle run on three wheels with a light motor. Autorickshaw drivers can be easily found in semi and urban cities of the country. Life of auto drivers is not at all easy, they have to wait for a long time to get one passenger, and there are some days when they hardly get a passenger. Autorickshaw drivers are not paid on the hourly basis or monthly basis. They get license and permit from Regional transport Office (RTO).RTO is a government authority which is authorised for registration and issues license and permits to the vehicles run on the road. It is situated in every stateof our country.[1]EMBARQ India's analysis on the size of the auto-rickshaw market in select Indian cities, based on government records, indicates that Tier I cities in India (with population greater than 4 million) typically have more than 50,000 auto-rickshaws, while Tier II cities (with population between 1 and 4 million) have between 15,000 and 30,000 auto-rickshaws. Auto-rickshaws, thus, constitute a significant share of the vehicle mix in cities. Further, auto-rickshaw density in relation to city population varies from around 4 to 16 auto-rickshaws per 1000 people in Tier I and II cities.

Addiction:-simply means being addicted of a particular substance i.e.Smoking, alcohol, tobacco chewing etc. Some auto drivers are addicted of above addictions that can be harmful and can create health problem like blood pressure, heart attack, diabetes, kidney related problem to them.

Insurance: Risk and uncertainty is everywhere in life. This is impossible to eliminate such risks and uncertainty but security can be done against such type of risk through insurance. Insurance means where you pay the premium to insurance co. and get yourself insured against specified losses, damage, illness etc. Among different insurance there is Personal Accidental Insurance.

Technological advancements have led to improved quality of life but it has also increased hazards, making human beings more susceptible to accidents. These accidents may cause death, confinement to bed for weeks or may leave a person incapacitated for the rest of his life. Unfortunately, wecannotguarantee that such mishaps will not occur; however we can mitigate the financial suffering arising out of such mishaps. To provide financial support to the victims of these accidents, insurance companies have a personal accident for individuals, family members and members of organisations etc. at a very nominal yearly premium.

The policy provides compensation in the event of the insured person sustaining bodily injuries resulting solely and directly from accident caused by external and violent means resulting in death or disablement, within 12 months of its occurrence.

An accident may include events like:

- Rail / Road / Air Accident.
- Injury due to any collision /fall.

- Injury due to bursting of gas cylinder.
- Snake bite, frost bite.
- Burn injury, drowning, poisoning etc.

Welfare Schemes: Different welfare schemes have been made by government for the welfare of people .They are as follows:

Atal Pension Scheme: Under this scheme, an 18-year old will only have to contribute Rs. 42 every month for 40 years and for a 40-year old; the monthly investment amount is Rs. 291 for a period of 20 years. At the time of maturity, one can earn a pension amount of Rs. 1,000 to Rs. 5,000 every month. Anybody within the age group of 18 to 40 years can contribute towards this scheme until the age of retirement.

Pradhan Mantri Jeevan Jyoti Beema Yojana:This is a Term Life Insurance policy which covers the policyholder for an amount of up to Rs. 2 lakh. The premium amount is as low as Rs. 330 in a year and anybody within the age group of 18-70 years with a Savings Account in a bank can apply for this scheme. It's an accidental insurance cover which helps the policyholder's family in case of the accidental death of the policyholder.

Pradhan Mantri Suraksha Bima Yojana: As the name suggests, this scheme offers accidental death and disability cover up to Rs. 2 lakh. The yearly premium is as low as Rs. 12 and anybody with a Savings Account in a bank can apply for this scheme.

2. Literature Review

Ranjan Rajesh (2015) in his study analysed that those auto rickshaw drivers spend less time in driving lives a higher quality of life as compared to them who spend more time on driving.

Ramachandran Anitha, Bagrecha Chaya and Talur Sumangala (2015) found that most of the auto rickshaw drivers in Bangalore do not have life insurance, medical insurance, and credit/ debit cards. Factors like health issues, addiction etc. have impacted their economic life.

Sontakke Manohar Kanchan (2015)studied through detection of early signs of fatigue in drivers, accidents can be avoided. This can be done with the help of taking images and comparing with videos and human feature, so it will help to detect whether driver is lethargy or not.

Yesurajan M.and Dr.Indra T. (2017) in their study found due to hectic schedule of driving auto, they do not care for their health. Tendency of smoking and drinking also creates health problem among them.

Melwani Veena, Priya Angelin, Toppo Manju,Sethia Saumitra, khan Amreen and Melwani Satish (2018)concluded addiction of taking alcohol; tobacco chewing and smoking was general among auto rickshaw drivers in Bhopal**.** Sothere is a requirement for making them aware of regular health check-up.

3. Rationale of the study

Indore is a commercial city of Madhya Pradesh. With the increasing number of competition and public transportation, to know whatis the condition of auto drivers in Indore city, this study has been conducted.

4. Objectives of the study

Following are the main objectives of the research, they are as follows:-

1. To study about the insurance of autorickshaw drivers in Indore city.
2. To know about the addictions of autorickshaw drivers in Indore city.
3. To study regarding the condition of autorickshaw drivers in Indore city.
4. To analyse and give suggestions for the improvement of condition autorickshaw drivers in Indore city.

5. Research Methodology

The study: The study undertaken is exploratory in nature and based on survey method.

The sample: The study conducted in Indore city. In the study there are 110 respondents who are the autorickshaw drivers and not associated with Ola, Jugnoo and Uber has been collected. Convenient technique was used to select the respondents. The data collected from the age of 20-30 years, 30-40 years and 40 years and above. Education profile of less than 10^{th} and more than 10^{th} has been collected for the study.

Tool for Data collection: Primary data collected through self- structured questionnaire, which were close ended in nature. Secondary data from books, Internet, Journals, etc. has been collected.

Tool for Data Analysis: Total population of Indore is considered as finite were used for the study purpose. Statistics used like frequency distributions, graphs, tables and inferential statistics like Standard Normal, chi square andKolmogorov-Smirnov one sample test were implemented on the collected data. The data entry and analysis was performed by using Microsoft Excel and Statistical Package for Social Science (SPSS) version (21.0) and following test were conducted.

6. Hypotheses

The following hypotheses are formulated to test their validity in the context of above objectives:-

H01: There is no association between age and having accidental insurance.

H11: There is an association between age and having accidental insurance.

Conclusion: Calculated value of χ 2 = 2.436, and p = 0.296. Hence, there is no real evidence to reject null hypothesis. Calculated value of χ 2 is less than table value 5.991 at 5 % level of significance with 2 degree of freedom. It means auto drivers can take accidental insurance at any age. It shows there is no association between age and having accidental insurance.

H02: There is no association between age and having insurance for family.

H12: There is an association between age and having insurance for family.

Conclusion: Calculated value of χ 2 = 0.171, and p = 0.918. Hence, there is no real evidence to reject null hypothesis. Calculated value of χ 2 is less than table value 5.991 at 5 % level of significance with 2 degree of freedom.

So, our null hypothesis is accepted. That is there is no association between age and having insurance for family. A person of any age can take insurance for a family.

H03: There is no association between education and having accidental insurance.

H13: There is an association between education and having accidental insurance.

Conclusion: Calculated value of χ 2 = 5.941, and p = 0.015. Hence, there is an evidence to reject null hypothesis. Calculated value of χ 2 is more than table value 3.841 at 5 % level of significance with 1 degree of freedom. There is an association between education and having accidental insurance. Education gives the awareness and information that accidental insurance is must for them as it gives security them against accident.

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H04: There is no association between education and having insurance for family

H14: There is an association between education and having insurance for family.

Conclusion: Calculated value of χ 2 = 1.747, and p = 0.186. Hence, there is no evidence to reject null hypothesis. Calculated value of χ 2 is less than table value 3.841 at 5 % level of significance with 1 degree of freedom. Therefore it is concluded that there is no association between education and having insurance for family.

H05: There is no association between taking tobacco and smoke.

H15: There is an association between taking tobacco and smoke.

Conclusion: Calculated value of χ 2 = 6.264, and p = 0.012. Hence, there is an evidence to reject null hypothesis. Calculated value of χ 2 is more than table value 3.841 at 5 % level of significance with 1 degree of freedom. So, there is an association between taking tobacco and smoke. When one eats tobacco the chances of doing smoke increases.

Null Hypothesis,H06: $Po \geq$ .40, i.e. the proportion of auto drivers taking alcohol is equal to 40%.

Alternative Hypothesis H16: P<Po(left tailedtest) i.e. the proportion of auto drivers taking alcohol is not equal to 40%.

Conclusion: Since the calculated value $|Z| =$ 3.71 is less than table value of Z = -1.645 at 5 % level of significance. Hence the null hypothesis is rejected. It means auto drivers taking alcohol is less than 40%.

Null Hypothesis, H07: $Po \geq$ .40, i.e. the proportion of auto drivers eating tobacco is equal to 40%.

Alternative Hypothesis H17: P$\neq Po$ (two tailed test) i.e. the proportion of auto drivers eating tobacco is not equal to 40%.

Conclusion: Since the calculated value Z = 3.27 which is more than table value of Z=1.96 at 5% level of significance. So the alternative hypothesis is accepted .More than 40% eat tobacco.

Null Hypothesis, H08: $Po \geq$ .40, i.e. the proportion of auto drivers of smoking is equal to 40%.

Alternative Hypothesis H18: P<Po(left tailed test) i.e. the proportion of auto drivers of not smoking is equal to 40%.

Conclusion: Since the calculated value $|Z| =$ 3.71 is less than table value of Z = -1.645 at 5 % level of significance. Hence the null hypothesis is rejected. It means auto drivers smoke less than 40%.

Null Hypothesis, H09: $Po \geq$.10, i.e. the proportion of auto drivers have a problem related to heart is equal to 10 %.

Alternative Hypothesis H19: P<Po (left tailed test) i.e. the proportion of auto drivers have a problem related to heart is not equal to 10 %.

Conclusion:Since the calculated value $|Z| =$ **2.26** is less than table value of Z = -1.645 at 5 % level of significance. Hence the alternative hypothesis is accepted. Heart related problem among auto drivers is less than 10%.

Null Hypothesis, H010: $Po \geq$ .10, i.e. the proportion of auto drivers have a problem related to diabetes is equal to 10 %.

Alternative Hypothesis H110: P$\neq Po$ (left tailed test) i.e. i.e. the proportion of auto drivers have a problem related to diabetes is not equal to 10 %.

Conclusion:Since the calculated value $|Z| =$ **2.59** is less than table value of Z = -1.645 at 5 % level of significance. Hence the evidence shows thatalternative hypothesis is accepted. Diabetes among auto drivers is less than 10%.

Null Hypothesis, H11: $Po \geq$ .10, i.e. the proportion of auto drivers have a problem related to kidney is equal to 10 %.

Alternative Hypothesis H111: P$\neq Po$ (left tailed test) i.e. i.e. the proportion of auto drivers have a problem related to kidney is not equal to 10 %.

Conclusion:Since the calculated value $|Z| =$ **2.90** is less than table value of Z = -1.645 at 5 % level of significance. So, the null hypothesis is rejected.

Null Hypothesis, H12: $Po =$ .10, i.e. the proportion of auto drivers has a problem related to back pain and swelling equal to 10 %.

Alternative Hypothesis H112: P$\neq Po$ (two tailed test) i.e. i.e. the proportion of auto drivers have a problem related to back pain and swelling not equal to 10 %.

Conclusion:Since the calculated valueof Z = 4.25 which is more than table value of Z=1.96 at 5% level of significance. So the alternative hypothesis is accepted .More than 10% autorickshaw drivers have the problem of back pain and swelling.

Null Hypothesis, H013: $Po =$ .50, i.e. the proportion of auto drivers takenaccidental insurance for them is equal to 50%.

Alternative Hypothesis H113: P$\neq Po$ (two tailed test), i.e. the proportion of auto drivers takenaccidental insurance for them is equal to 50%.

Conclusion:

Null Hypothesis, H014: $Po =$ .50. That is the proportion of auto drivers takeninsurance policy for their family is equal to 50%.

Alternative Hypothesis H114: P$\neq Po$ (two tailed test), the proportion of auto drivers takeninsurance policy for their family is not equal to 50%.

Conclusion:

Null Hypothesis, H015: $Po = .50$, i.e. the proportion of auto drivers takenhappy with their work is equal to 50%.

Alternative Hypothesis H115: $P_{\neq}Po$ (two tailed test), i.e. the proportion of auto drivers takenhappy with their work is not equal to 50%.

Conclusion:

Null Hypothesis, H016: $Po = .50$, i.e. the proportion of auto drivers takensatisfied with their family life is equal to 50%.

Alternative Hypothesis H116: $P_{\neq}Po$ (two tailed test), i.e. the proportion of auto drivers takensatisfied with their family life is not equal to 50%.

Conclusion: The tabulated value of Z at 5% level of significance is 1.96.The calculated value $|Z|$ of H013 is **5.73**, H014 $|Z|$ **4.20**, H015 is **5.546** and H16 is **9.747**.So null hypothesis is rejected and a valid proof to accept alternative hypothesis. Less than 50 % auto drivers have accidental and insurance for their family. More than 50 % auto drivers are happy with their work and satisfied with family life.

H017: There is no difference among the respondents about getting problem from traffic police.

H117: There is a significant difference among the respondents about getting problem from traffic police.

Conclusion: The largest absolute difference is 0.20, which is known as the Kolmogorov-Smirnov D value, as the calculated D value exceeds the critical value of 0.129 at an alpha of 0.05.So the alternative hypothesis is accepted meansthere is a significant difference among the respondents about getting problem from traffic police.

H018: There is no difference among the respondents regarding government training.

H118: There is a significant difference among the respondents regarding government training.

Conclusion: The largest absolute difference is 0.63, which is known as the Kolmogorov-Smirnov D value,as the calculated D value exceeds the critical value of 0.129 at an alpha of 0.05, so the null hypothesis is rejected and can say that there is a significant difference among the respondents regarding government training i.e. they want government should provide training to them as per their requirements or needs.

H019: There is no difference among the respondents about getting problem from RTO.

H119: There is a significant difference among the respondents about getting problem from RTO.

Conclusion: The largest absolute difference is 0.24, which is known as the Kolmogorov-Smirnov D value, as the calculated D value exceeds the critical value of 0.129 at an alpha of 0.05, so the alternative hypothesis is accepted. It shows that auto drivers get problem from RTO.

7. Results and Discussions

Table 1:**Age**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30 years	22	20.0	20.0	20.0
	30-40 years	34	30.9	30.9	50.9
	40 years and above	54	49.1	49.1	100.0
	Total	110	100.0	100.0	

From the above table it is known that, the respondents belong to the age group of 20-30 years were (20%), 30-40 years (30.9 %) and 40 years and above (49.1%).

Table 2:Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 10 th	67	60.9	60.9	60.9
	More than 10th	43	39.1	39.1	100.0
	Total	110	100.0	100.0	

In relation to education from table 2, it is clear that less than $10^{th}$are (60.9%) and more than $10^{th}$are (39.1%) in the study.

Table 3:Traffic Police

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	51	46.4	46.4	46.4
	Agree	17	15.5	15.5	61.8
	Strongly agree	42	38.2	38.2	100.0
	Total	110	100.0	100.0	

From table 3, it is analysed that46.4% are disagree, 38.2% strongly agree and 15.5% agree, that they get problem from traffic police.

Table 4:Government training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	7	6.4	6.4	6.4
	neither agree or disagree	1	.9	.9	7.3
	Agree	11	10.0	10.0	17.3
	Strongly agree	91	82.7	82.7	100.0
	Total	110	100.0	100.0	

From the above table it is analysed that 6.4%, 0.9% neither agree nor disagree, 10% agree and 82.7%felt that government should provide time to training.

Table 5 : RTO

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	48	43.6	43.6	43.6
	Agree	14	12.7	12.7	56.4
	Strongly agree	48	43.6	43.6	100.0
	Total	110	100.0	100.0	

In respect of RTO, from table 5, 43.6% disagree, 12.7% agree and 43.6% strongly agree that they have problem from RTO.

8. Implication

- Government, NGO'S, Private and Public institution should come together to improve the condition of autorickshaw drivers in Indore.
- Government should start separate helpline number to listen the problems of auto rickshaw drivers.
- Awareness for accidental insurance and family insurance can be done through role play, shortmovies etc.
- Government and RTOshould jointly provide training to the auto drivers to drive safely, and how to fill the forms in RTO regarding verification and all.
- Insurance company should reduce the amount of insurance of autorickshaw, so the financial burden on drivers can be reduced.

9. Limitations of the Study

The researchers collected data from 110 respondents and 5 respondents rejected to give response .Though it was quite enough to test the data, but not adequate to generalise as a whole. Along with quantitative research, qualitative research could have been done. Responses of auto drivers are conceded to be true and final.

10. Further Study

This will be quite fascinating to do the further intensive study on this topic. Along with this, study on other demographical profile can be done. With quantitative, qualitative research can be conducted in future research.

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