Economical consequences faced by teachers of several coaching institutions due to COVID-19 lockdown

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Abstract

In this paper we have conducted the study of economic condition of coaching teachers who have been badly affected due to COVID-19 lockdown. The main objective of this paper is to compare the economic condition of teachers who are teaching in different type of coaching centre before and after COVID-19 lockdown. To conduct our study we have used response of 51 coaching teachers belonging to different types of coaching institutions situated in Patna. Using various statistical tools and techniques we have observed that economic condition of the teachers is significantly affected due to COVID-19 Lockdown.

Key words- Coaching centre, COVID-19, Lockdown, Unemployment, Economic condition.

Introduction

COVID-19 become loss for everything from health to education but the education sector witness a massive disruption when a countrywide lockdown was imposed due to COVID-19 pandemic last year. Regular classes were completely closed and student shifted to the online mode for their courses. Educational institution both those offering regular courses as well as those offering coaching classes for competitive exam sensed the need of adoption to the new changes. But the teachers of small coaching centres faced a lot of problems because they did not take annual tuition fee at one time they take fees monthly unlike big coaching centres who take tuition fee once (or twice in a year) . For those whose teaching is as a part time job they did not faced as problem as whom are completely dependent on coaching for their source of income. We are doing this study so that we can know statistically as per data that how much and how badly corona impact is there on the economic condition of the teachers. According to THE HINDU article, coaching centres in Hyderabad had faced tough times. The pains of the lockdown in pandemic were in continuous for the teachers of hundreds of coaching and training centres. With social distancing and staggered timings, schools and colleges were allowed to reopen but there were no direction regarding coaching centres. As a result, numbers of coaching centres got shut down and some were conducting their classes secretly. The small scale centres faced tough times as offline coaching was not allowed. The article published in BW online Bureau on 21 June 2021 that coaching institutions had started reinventing to combat COVID- 19 pandemic impact as the Coaching Industry had witnessed the cascading effects of the COVID -19 crisis since last year. The industry, which had annual revenue of over Rs 25,000 crore, had been reinventing to come out of the adverse impact of COVID-19 with the help of new tools and solutions. Every year, during the first quarter, coaching institutes around the country were taking admission of students in lakhs, aspiring for entrance to premier

institutes. In the wake of a second wave of pandemic this year, numbers were expected to be decreased. The leading coaching institutes now came out with a disruptive hybrid coaching model with offer of both offline and online modules which clearly showed the bad impact of pandemic on coaching centres so that coaching could get start again. Similarly in the article of THE TIMES EXPRESS written by Prashant Shanker had said that the study hub had walked in the pandemic back from top and the teachers of Bihar planned to stay. The experiment was underlying the objective as Study of unemployment of teachers of different coaching centres, Study of loss of income of teachers of different coaching centres, changing in life style due to decrement in income.

Methodology

The study is conducted at Patna District, the capital of Bihar. The research is conducted on a sample of 51 respondents from coaching centres of Patna using a structured questionnaire through Google form and collecting data through coaching centre. Sampling design- In our sampling procedure we have selected the units by stratified sampling where the strata units were the coaching institutions of Patna. The study is based on the sample of 51 respondents of coaching centres from Patna. Our strata are various coaching institution i.e., academic coaching, professional coaching and competitive coaching.

One Way ANOVA, according to Fisher (1918), Analysis of Variance (ANOVA) is the "*Separation of variance ascribable to one group of causes from the variance ascribable to other group.*" By this technique the total variation in the sample data is expressed as the sum of its non-negative components where each of these components is a measure of the variation due to some specific independent source or factor or cause. The ANOVA consists in the estimation of the amount of variation due to each of the independent factors (causes) separately and then comparing these estimates due to assignable factors (causes) with the estimate due to chance factor (causes), the latter being known as experimental error or simply error. Paired t- test first introduced by Gosset (1908) it is a type of 't' test in which it is used to test the difference of mean between same samples. We can use this test when we have data values are paired measurements. Also, the distribution of differences between the paired measurements should be normally distributed. Chi-Square test It is applied for testing the independency of two attributes. These are distribution free testing method. Chi Square is commonly used for non-parametric test. χ^2 –test was firstly used by Karl Pearson in (1900) which is denoted by square of the Greek letter χ. The quantity χ^2 describe the magnitude of the discrepancy between theory and observation.

$$\text{Formula of } \chi^2\text{-}\sum_{i=1}^{n}\frac{(O_i-e_i)^2}{e_i}$$

where, O_i is observed frequency, e_i is expected frequency, e = rt*ct/n, rt is the row total for the row containing cells, ct is the column total for the column containing cell, n is the total number of observation, O_i is given in the question and e will be find out from the given above equation. Degree of freedom (df) = (r-1)(c-1) and r is the number of rows ,c is the number of column.

Respondent description

The personal response of the respondents makes clear that there are sample of size 51. It can be easily seen from that most of the students are of age from 25-35 and Very few are of age above 35.there are only 20% of female respondent are there sample and 80% of respondents are male. Proportion of married and unmarried teachers is almost 50%. From Table we can say that there are 75% of teachers who belong outside Patna and only 25% who belongs from inside Patna. We can find that out of 51 teachers 70% teacher have full time job as a coaching teachers. From Table we can find easily that the most of the teachers are graduated and very few have done research .This clearly seen that there are 39.2% teachers

whose earnings are between Rs. 500000- Rs. 1000000 per annum which are maximum in all income groups. It is seen that 66% teachers of whole sample shifted their offline coaching to online coaching due to covid-19 pandemic.

Univariate analysis

Table-1

Coaching Shifted (offline mode to online mode)	Frequency	Percent
No	16	31
Yes	34	67

Result- The above table shows that 67% teachers started online coaching classes after COVID-19.

Table- 2

Increase in expenses due to online Classes	Frequency	Percent
No	19	37
Yes	30	59

Result: By the above table we conclude that 59% teachers' expenses were increased due to online coaching.

Table-3

Job Status	Frequency	Percent
Full time	36	71
Part time	15	29
Total	51	100

Result: As we can see from the above table that 71% of teachers are teaching in the coaching centre as their full time job while 29% coaching teachers are involved in some other jobs also besides teaching.

Table-4

Statistics	No. of dependent(economically) person on a coaching teacher
Mean	4
Minimum	0
Maximum	8

Result: As we can see that from the above table that on average 4 members of the family are economically dependent on a coaching teacher.

Table 5

Result: As we can see that from the given table that 91% of total sample who agree that COVID-19 pandemic affect their economic condition and only 9% respondent's economic condition does not

Educational qualification of Teachers	Frequency	Avg. annual Income
12th/Intermediate/Diploma	8	163750
Graduate	23	630434.7826
post graduate	16	812500
Research (M.Phil., Ph.D.)	4	1275000
Total	51	664901.9608

affected due to COVID-19 pandemic.

Table-6

	Minimum	Maximum	Mean	Std. Deviation
Avg. monthly income before COVID-19 pandemic	1800	300000	60440.00	54338.2772
Avg. monthly income after COVID-19 pandemic	1000	270000	51295.00	51404.8457

Result-It is clearly seen in this table that average monthly income get decreased after COVID-19 pandemic.

Table-7

Economic Condition affected due to COVID-19	Frequency	Percent
No	4	9
Yes	42	91
Total	46	100

Result- 82% of the respondent accept that they did not get proper salary during COVID-19 pandemic

Received Salary Properly	Frequency	Percent
No	41	82
Yes	9	18
Total	50	100

lockdown.

Table - 8

Types of coaching	No.	Avg. No. of Student before COVID-19 Pandemic	Avg. No. of Student After COVID-19 Pandemic
Academic	36	337	230
Competitive	11	641	451
Professional	4	1050	188
Total	51	458	274

Result: We observe from the above table that the no. of students from each type of coaching centres is decreased after COVID-19 lockdown.

Table 9- ANOVA table

source of variation	Sum of Squares	Df	Mean Square	F	Sig.
annual income	3.87399E+12	3	1.29133E+12	2.87	0.046
Error	2.11155E+13	47	4.49266E+11		
Total	2.49895E+13	50			

Null Hypothesis- Annual average income does not depend on the educational qualification.

Interpretation- The obtained p- value in the both Table is 0.04 which is significant p value is less than 0.05 value so we will reject null hypothesis which mean that annual income depend on the educational qualification.

Table 10

Null Hypothesis: Number of students is not affected by COVID-19.

Avg. no. of students	Before Covid-19 pandemic	After Covid-19 pandemic	t-sign. (p value)
	459	275	0.01

Result: p- value obtained is 0.01

Interpretation- The obtained p- value for the difference in no. of students before and after COVID-19 is 0.01 which is significant p value, So we will reject null hypothesis which mean that no. of student depend on the COVID-19. It is clearly seen that no. of student in a coaching centre is decreased very much after COVID-19.

Table 11

	Before Covid-19	After Covid-19	t-sig. value
Average monthly income	60440	51295	0.001

Null Hypothesis: Average monthly income did not affect by COVID-19 before and after corona.

Result: p- value obtained by given Table- is 0.001.

Interpretation:-The obtained p- value of the average monthly income before and after COVID-19 is 0.001 which is highly significant p value therefore we will reject null hypothesis which mean that average monthly income depend on the COVID-19. It is clearly seen that average monthly income had decreased after COVID-19.

Table 12

Types of house hold expenses	before Covid-19	after Covid-19	t-sign(p value)
House rent	13279	9686	0.329

Grocery	9112	8148	0.264
Education	8340	7652	0.553
Health/Medicine	3102	4546	0.088
Miscellaneous	5984	6580	0.402

Null Hypothesis: Monthly house hold expenditure did not affected by COVID-19 before and after corona.

Result: p- Value for various house hold expenses are in house rent is 0.329,in grocery is 0.264,in education is 0.553,in health/medicine 0.088 and for miscellaneous is 0.402.

Interpretation -The obtained p- value for the monthly house rent in both before and after COVID-19 is 0.329 which is not significant p value is greater than 0.05 value so we will accept null hypothesis which mean that monthly house rent independent on the COVID-19.but there mean get decreases after COVID-19 pandemic it means that people compromises with house rent and if we take large sample it will significantly affected this result is coming due to error fluctuation. similarly in case of grocery and education p value is greater than 0.05 value so we will accept null hypothesis which mean that monthly expenses on grocery and education independent on the COVID-19.but there mean get decreases after COVID-19 pandemic it means people compromises with their life style. but in case of health/medicine there mean get increases after COVID-19 it means that people get more possessive about their health that's why mean of expenses in health/medicine get increases.

Table 13

Avg. No. of Month Involve in teaching		t-sign. (p-value)
Before Covid-19	11	0.00
After Covid-19	8	

Null Hypothesis: No. of months teachers involve in teaching did not get affected by COVID situation.

Result: p- value obtained by given table is 0.00.

Interpretation -The obtained p- value of the no. of months teachers involve in teaching is 0.00 which is highly significant p value is less than 0.05 value so we will reject null hypothesis which mean that teaching involvement is affected by covid-19 pandemic.

Table 14

Employment status * Annual income Cross tabulation			
Annual income			
employment status	Below 1 lac	1 lac. to 5 lac.	More than 5 lac
full time	3	11	22

part time	5	8	2
Total	8	19	24
Chi-Square Tests			
	Value	d.f.	Sig. (p-value)
Pearson Chi-Square	10.8	2	0.004

Null hypothesis: Both the factors are independent.

Result: The obtained p-value is 0.004.

Interpretation: The p-value is 0.004 which is less than 0.05, so we will reject the null hypothesis at a 5% level of significance. Thus the factors 'employment status' and 'average annual income' depends on each other.

Conclusion

Most of the teachers were between the age of 25- 35 in which most of them belongs from outside of Patna and maximum no. of teachers were dependent only on coaching centres for their source of income. Almost 67% of respondent agreed that they shifted their mode of teaching from offline to online after COVID-19 situation in which 59% of respondent accepted that online coaching increased their expenses and it is not as relevant as offline coaching in terms of their income. The annual income depends on the educational qualification of teachers higher the educational qualification, higher the income. Numbers of months in which teachers are involved in teaching get affected by the Covid-19 pandemic because average number of months get decreases after Covid-19 pandemic which completely affect their income. Numbers of students get decreased after the COVID- 19 pandemic which is a significant reason for the decrement in the income of the teachers after the pandemic. In household expenditure average house rent decreased which means that people cannot afford house rent which they were doing before pandemic. Similarly in case of grocery, average expenses get decreased that means people compromised with their lifestyle but in case of health/medicine, average expenses get increased after COVID- 19 pandemic that shows that people became more possessive than before COVID- 19 pandemic. Savings of teachers also get decreased after COVID- 19 pandemic which show their economic condition is badly affected after lockdown.

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