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A Statistical Study on Unemployment Rate and Its Resultant Consequences in Fresh Graduates of Punjab University

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Abstract

Unemployment is when a person actively searches for employment but cannot find work. Unemployment is considered an essential measure of the health of the economy. A cross-sectional study was conducted among fresh graduates at the University of Punjab, Lahore. Non-probability convenience sampling method was used in this research. The information sought included demographic characteristics and questions measuring mental and psychological well-being, job search intensity, Optimism, employment commitment, and pessimism in fresh graduates. Pearson correlation coefficients were found to assess the strength of the relationship between various factors. The binary logistic regression model was used to find the relationship between employment and different elements.
Furthermore, multiple linear regression models were used to assess the relationship between the psychological well-being of fresh graduates with various factors. A total of 278 fresh graduates, 53% females, participated in the study. The majority (63%) of the participants were unemployed, and 63% of respondents faced unemployment during the first twelve months. The majority (52%) were between the ages of 23-29 years, with an average age of the graduates being 23 years. Most (64%) were graduates of M.S., and 62% of graduates got an average GPA in their last semester or year. It is concluded from the present study that the majority of the graduates were unemployed. Unemployment hurts a person's personal life and society and can partially destroy the country's economy. More research and studies are needed on this issue to assess more knowledge about the unemployment rate in fresh graduates and their mental consequences.

Keywords

Unemployment, Fresh graduates, society behaviour, Mental and psychological consequences.

1. Introduction

The unemployed are divided into two groups: those who have never worked after graduating from university and those who have lost their jobs and hence seeking new employment. (Iqbal *et al*., 2013). A high unemployment rate wastes resources, making it a significant issue, and the income of individuals is depressed. In contrast, an unemployed graduate is defined as a graduate who is unemployed if they are looking for work and willing to work at the prevailing wage but cannot find a job. Qayyum and Siddiqui, (2007)

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used a time series approach to examine the historical relationship among unemployment, life expectancy, and mortality rates. For the whole U.S. population as well as for categories identified based on race and gender, Bianchiet *et al*. (2021) fitted Vector auto-regressions. They evaluate the long-term consequences of the COVID-19 economic downturn on mortality and life expectancy. Depending on race and gender, they anticipate that the COVID-19-related unemployment shock will be between 2 and 5 times bigger than the ordinary unemployment shock, leading to a sharp rise in death rates and a reduction in average life expectancy.

The issue of unemployment affects every country in the globe, while some have had higher unemployment rates than others. According to the International Labour Organization (ILO) estimates, the global economic crisis caused the number of unemployed people to rise from 178 million in 2007 to 212 million by late 2009. In 2010, the unemployment rate in the U.S. reached a record high (9.6%), but after that it began to decline. It was 8.9% in 2011 and had decreased to 5.9% as of September 2014 (data from the Bureau of Labor Statistics of the U.S. Government). Things in the U.K. are gradually improving after reaching an 8.1% unemployment peak in 2011, with the rate of unemployed individuals falling to 7.6% in 2013. Japan's shock was less severe, with unemployment rising from 4.0% in 2008 to 5.1% in 2009 and 2010, then falling back to 4.0% in 2013. (Pasquali, 2015).

In 2005, the National Council of India carried out a census revealing that 30000 graduates were employed in an area unrelated to their higher education credentials, and 59000 graduates and certificate holders were unemployed (Hanapi and Nordin, 2014). Out of the 2.12 million graduates in China's general higher education sector in 2003, or 640,000 people did not have a work contract in place by the time their studies were complete, according to information published by the Ministry of Education China (Nanping, 2004). Unemployment has shown an increase in unemployment rates from 5.9% in 1998 to 7.8% in 2000 may be seen. Both males and females have experienced this increase. Male unemployment is lower (6.1%) than female unemployment (17.3%). (LBF Survey, 2000). In Pakistan, 113 million unemployed individuals are currently unemployed, or more than 12 percent of the population. (Nanping, 2004).

Additionally, while the unemployment rate for young people, typically defined as those between the ages of 15 and 24, is typically about twice that of adults (since many young people are still in school or have just graduated), it has risen during the recent recession to almost triple that of adults, and even reached four times in some nations. According to statistics from the International Labor Organization (ILO), 12.6% of young people worldwide are unemployed. Near the crisis's height in 2013, 73 million young people were without jobs. In a recent report on the subject, the ILO states that "the weakening of the global recovery in 2012 and 2013 has further intensified the youth jobs crisis and the queues for available positions have grown longer and longer for some unfortunate young jobseekers." In fact, it has been so long that many young people have given up looking for work (Pasquali, 2015).

High youth unemployment has many causes, including under education, a lack of skills, structural imbalances, differences in the demographics of urban and rural areas, a lack of experience, discrimination against certain regions or provinces in the distribution of job opportunities, sectoral imbalances, etc (Qayyum and Siddique, 2007). Unemployment

influences a variety of economic factors, including output, human capital depletion, social marginalization, crime, and societal instability (Kingdon and Knight, 2004).

Shamsuddin *et al*. (2013) conducted a study to find out how aware and how the government's attempts to reduce graduate unemployment were seen by Universidad Tenaga Nasional (UNITEN) final year students. With a sample size of 491 students, information was gathered through questionnaires. According to the report, most graduates were unaware of government initiatives or programmers, like Skim Latihan 1 Malaysia (SL1M), that were designed to reduce graduate unemployment in Malaysia. Nevertheless, yet, most of those graduates had favourable opinions of government initiatives or programmers since they expressed a strong desire to enrol in them. Also, it was clear from the results that there was a strong correlation between respondents' awareness, attitudes, and skills. The degree of awareness and the government's promotional efforts were likewise significantly correlated.

The 70% of the 442 people were male. Among 442 members of the educated class, 178 (41%) thought that the high rate of population growth, 127 (29%) the lack of coordination between education and employment opportunities, 89 (20%) a lack of resources, 33 (8%) the education system, and 15% red ribbons were the main causes of unemployment among the educated class (Iqbal at al., 2013). In the McGee and Thompson (2007), almost 12% of emerging adults (PHQ-8 10) and 23% of them were unemployed. Depression among unemployed adults was diagnosed at significantly higher rates than those with employment. In the final model, unemployed emerging adults had almost 3-times higher probabilities of depression than employed ones.

Unemployment in fresh graduates is one of the major societal problems in developing countries like Pakistan. As the standard of education have become much better, in recent years, in Pakistan. Contrary to it, the unemployment level is increasing among fresh graduates. The present study focused on covering the unemployment problem in fresh graduates as there has not been much massive research on it, previously. It has been observed that fresh graduates do not have many skills according to labour market demands due to lack of training institutions and infrastructure making it difficult to reach high employment levels, and it is undoubtedly a contributing reason to the high unemployment rate among young generations. Long-term unemployment consequently has a negative impact on one's mental and physical health. The current study aims to quantify the prevalence of unemployment among recent graduates as well as any associated mental or psychological effects. From this point forward, this study will aid in developing assessment measures to counteract the detrimental psychological and mental effects of unemployment on recent graduates.

2. Material and methods

A cross-sectional study and non-probability convenience sampling were used to study population consisted of 3594 fresh graduates enrolled in M.S. and M.Phil. programs during the year 2015-2016 in University of the Punjab, New campus, Lahore. Data was collected through a self-administered structured questionnaire. The information sought included demographic characteristics (age, gender, program, department, monthly family income, CGPA in last semester, city, area of residence, employment status, field of work, period of employed and unemployed person) and the questions measuring mental and

psychological well-being, job search intensity, Optimism, employment commitment, and pessimism in fresh graduates.

The study was authorized by the educational authorities of College of Statistical and Actuarial Sciences, University of the Punjab, Lahore. Participants were informed about the purpose of study and their verbal consent was obtained before administering the questionnaire. Confidentiality and anonymity of the research was also granted to the participants. Statistical Package for Social Sciences (SPSS) version 17.0 (2017) was used for data entry and analyses.

The reliability of the instrument was used found to be 0.827. Initial analysis included computing frequency distribution for categorical variables and mean ± standard deviation for continuous variables. Job search intensity was comprised of 7 items on a 5-point scale [1=Never, 2=Really, 3=Occasionally, 4=Frequently, 5=Very frequently]. Optimism was consisted of 4 items, using a 5-point response scale ranging from 1 (strongly disagree) to 5 (strongly agree). Psychological well-being was indicated of 3 items on 4-point scale (1=so less than usual; 4=much more than usual). Employment commitment was required to indicate the degree to which they want to be employed of 3 items on a 5-point scale (1=strongly disagree; 5=strongly disagree). Pessimism was comprised of 3 items on 5-point scale (1=strongly disagree; 5=strongly disagree). A global score was computed by summing the ratings on all the items of each factor. A higher global score indicated more intense job search seeking, greater Optimism, and higher degree of psychological stress, greater employment commitment and greater level of difficulties.

Pearson correlation coefficients were found to assess the strength of relationship between various factors. Binary logistic regression model was used to find the relationship between employment and various factors. Furthermore, multiple linear regression model was used to assess the relationship between psychological well-being of fresh graduate with various factors. All the tests were performed were two-tailed and tested at 5% level of significance.

3. Results

A total of 278 graduates from the University of Punjab, Lahore, participated in the study. Out of the total sampled population above half the respondents (52%) were between the ages of 23-29 years, and 53 were female, most of them (64%) were from M.S. program, 68% were students of science faculty, and 62% graduates got above average GPA marks in their last semester or year, and majority (74%) were day scholars. The monthly family income of about half of the respondents (49%) were above 60,000 PKR. In this sampled population, most of graduates (63%) were unemployed. Among the employed graduates, most (47%) were doing jobs in I.T./ engineering fields, and their employment duration was 1 – 2 years (48%). Whereas the duration of being unemployed of most graduates (85%) was ≤1 years (Table 1).

In Table 2, Job search intensity (JSI) of the graduates was statistically significantly highly positively correlated with psychological well-being (PWB), employment commitment (E.C.), pessimism (PSM) and age of the graduates, whereas highly negatively associated with employment status (E.S.) and gender (p-value <0.01). In contrast, JSI was not statistically significantly correlated with Optimism (p-value > 0.05). There was found to be a statistically considerably high positive correlation between OPT and E.C. (p-value < 0.01) and positively correlation between OPT and age (p-value < 0.05).

Table 1: Demographic characteristics of fresh graduates of Punjab University (N=278).

	Variable attribute	**Frequency**	**%age**
Age (Years)			
	20-22	134	48.2
	23-29	144	51.8
	Mean ± S.D.	22.64 ± 1.496	
Gender			
	Male	132	47.5
	Female	146	52.5
Enrolled in program			
	MS	177	63.7
	M.Phil.	101	36.3
Faculty			
	Faculty of Science	189	68.0
	Faculty of Engineering and Technology	37	13.3
	Faculty of Arts	27	9.7
	Faculty of Commerce/ Economics/ Management	25	9
CGPA marks			
	Below Average	17	6.1
	Average	90	32.4
	Above Average	171	61.5
Residence			
	Day scholar	206	74.1
	Hostelite	72	25.9
City			
	Lahore	210	75.5
	Other	68	24.5
Monthly family income(PKR)	≤ 60,000	141	50.7
	> 60,000	137	49.3
Current employment status	Employed	104	37.4
	Unemployed	174	62.6
Field of work now			
	Business	16	15.5
	Social Sciences / Education	18	17.5
	I.T. / Engineering	48	46.6
	Other	21	20.3
If employed, duration of being employed			
	≤1 year	45	43.3
	1 – 2 years	50	48.1
	>2 years	9	8.7
If unemployed, duration of being unemployed			
	≤1 year	175	63
	1 – 2 years	89	32
	>2 years	14	5.0

Table 2: Correlation between various factors (N=278).

Factors	1	2	3	4	5	6	7	8
Job search intensity	1	0.025	0.416**	0.196**	0.237**	-0.236**	0.182**	-0.222**
Optimism		1	0.078	0.339**	0.040	-0.016	0.138*	0.023
Psychological well-being			1	0.132*	0.351**	-0.154**	-0.001	-0.133*
Employment commitment				1	0.241**	-0.205**	0.138*	-0.099
Pessimism					1	-0.025	0.050	-0.053
Employment status						1	-0.269**	0.396**
Age							1	-0.207**
Gender								1

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

But OPT was statistically insignificantly correlated with JSI, PWB, PST, E.S. and gender (p-value > 0.05). Psychological well-being (PWB) was statistically significantly highly positively correlated with PSM and JSI and highly negatively correlated with E.S. (p-value <0.01). The variable PWB was statistically significantly positively correlated with E.C. and negatively correlated with gender (p-value < 0.05). On the other hand, PWB was not found to be statistically significantly associated with OPT and age (p-value > 0.05). Employment commitment (E.C.) was found to be statistically significantly highly positively related to PSM, JSI and OPT, and highly negatively related with employment status (p-value <0.01). On the other side, E.C. was statistically significantly positively correlated with age and PWB (p-value < 0.05). While there was not statistically significantly correlation between E.C. and gender (p-value > 0.05). Pessimism (PSM) was found to be statistically insignificantly correlated with E.S., OPT, age and gender (p-value > 0.05). E.S. was found to be statistically significantly highly negatively correlated with JSI, PWB, E.C. and age whereas high positive correlation was observed between E.C. and gender (p-value < 0.01). On the other hand, E.S. was found to be statistically insignificantly negatively correlated with OPT and PSM. There was a statistically significantly highly positive correlation between age and JSI. Age was found to be statistically significantly highly negatively correlated with gender and E.S. (p-value < 0.01), while statistically significantly positively correlated with OPT and PWB (p-value < 0.05). Gender was found to be statistically significantly highly positively correlated with E.S. and highly negatively correlated with JSI and Age (p-value < 0.01). Gender was not found to be statistically significantly correlated with OPT, E.C. and PSM (p-value > 0.05).

In Table 3, the statistical significance of independent variables in the logistic regression model was tested by using the Wald statistic. It can be seen that by using the Wald statistic variables: being male gender, high employment commitment, higher grades and lesser age was statistically significantly related with employment in fresh graduates (p-value < 0.05). Whereas the variables job search intensity, Optimism, psychological well-being and pessimism were not statistically significantly related to employment in fresh graduates (p-value > 0.05).

In Table 4, Job search intensity and pessimism was found to be statistically significantly associated with psychological well-being (p-value < 0.05). While Optimism, employment commitment, age, gender and monthly family income was not found to be statistically significantly associated with psychological well-being (p-value > 0.05).

Table 3: Wald test.

Variables	B	S.E.	Wald	DF	p-value
Gender	1.612	0.304	28.117	1	0.000
Job search intensity	0.046	0.032	2.055	1	0.152
Optimism	-0.038	0.049	0.589	1	0.443
Psychological well-being	0.083	0.075	1.240	1	0.266
Employment commitment	0.164	0.066	6.259	1	0.012
Pessimistic	-0.112	0.066	2.925	1	0.087
Age	-0.254	0.105	5.814	1	0.016
Percentage-marks	0.047	0.019	6.134	1	0.013
Constant	-12.673	2.715	21.786	1	0.000

Table 4: Multiple linear regression.

Variables	Beta	p-value
Job search intensity	0.144	0.000
Optimism	-0.068	0.077
Employment commitment	0.034	0.515
Pessimism	0.247	0.000
Age	-0.129	0.125
Gender	-0.233	0.363
Monthly family income	0.029	0.669

4. Discussion

Unemployment rate in fresh graduates and their mental consequences is becoming the major issue of this era. In this study, we surveyed the different variables such as job search intensity, coping with job loss, Optimism, financial hardship, and mental/psychological consequences of being unemployed. The reliability of this study was 0.827 which means the result showed high correlation amongst the items; suggesting that the variables were internally related and measured he same concept. This survey was done by taking the sample of 278 regular students enrolled during the academic session 2014-2015 in various faculties of University of Punjab, Lahore.

The findings of this study revealed that most fresh graduates (63%) were unemployed. Whereas, in the studies conducted by Qayyum (2007) and Witte *et al*. (2012), only 8% and 21% respondents were unemployed. There might be several reasons for much higher unemployment among the studied population compared to the previously reported unemployment rates. First, fresh graduates do not have many skills according to the demands the labour market or less job opportunities compatible to the field of study. Second, the study sample only comprised graduates enrolled in any university program to extend their education further. So, it might be a reason that graduates still complete their education and did not pursue any job. Third, because merit system is not considered for the recruitment of the employee.

In this survey, most graduates wanted to commit to finding work because they would continue to want to work even if they could receive more money from social security. For them, being actively engaged in their jobs was crucial since they would get bored otherwise. According to different findings from a prior survey by Witte *et al*. (2012), over 96% of them said work was vital, especially since it gives life meaning. Unemployment affects standard of life because it lowers income due to greater job competition and people's willingness to accept lower wages. According to the job, either their skills fit or didn't. For them, just employment is a consideration.

In this sample population, CGPA and male gender was found to affect employment in fresh graduates significantly. But in the study of Ismail (2011), being employed was associated with male gender and not associated with CGPA. According to the study's findings, graduates who were Indian or female had a lower likelihood of finding employment. Because females face more complications as compared to male in our society. They depend on their family members. Insignificant results for female's show that grades don't matter at all to get an opportunity; only personal skills and experience are required. Males have the responsibility to provide financial support to their family. Financial difficulties are caused by unemployment for the family. Men who are unable to pay their bills on time cause stress in the home, anger in the family, and even suicidal thoughts.

Graduate employment commitment (E.C.) is positively connected with the intensity of their job search (JSI). The findings of a prior study showed that employment commitment was statistically significantly connected with job search intensity, which supported our investigation findings. In a separate study of Belgian jobless people, it was discovered that South African jobless were by comparison more dedicated to finding jobs and actively sought it out.

As in this research, psychological well-being is related with job search intensity and pessimism. Hence psychological well-being was causing the long -term unemployment. According to unemployed graduates, the reason of unemployment is because of depression; continued disappointment and their attitude of comparison towards employed graduates. And this all because of disturbed economic situation. So in short, economic crisis is the major hurdle to getting job opportunities.

Unemployment has an impact on people's personal lives, but it also negatively impacts society as a whole and, to some extent, the country's economy. Morale is damaged, courage, confidence, and ambition are destroyed, and poverty is the end result. A person's social life was negatively impacted by unemployment. The study highlights a few negative effects of unemployment on people's personal and family lives, including skill loss, diminished confidence, and self-esteem issues.

The results of this study cannot be generalized on broader scale due to the various limitations. Firstly, studied sample was comprised on graduate's population from only a single university. Hence, these graduates may not be representative of all graduates in a country. It is likely that some study participants may have purposefully or unintentionally misreported on any of the questions because the questionnaire was self-completed. The fact that study participants filled out the questionnaires anonymously likely reduced the likelihood of deliberate miss-reporting. Furthermore, because this study was built on cross-sectional survey data, it is not possible to conclude the temporal correlations between the

variables. Another limitation is the use of convenient sampling. Also, the present study did not assess the regional and urban-rural differences for unemployment. More studies on similar lines should need to be conducted to evaluate the in-depth consequence of unemployment in graduates so that some strategy should be planned to minimize the negative psychological and social effects on the health of graduates.

5. Conclusion and policy implication

It is concluded from the present study that unemployment is a major problem among graduates, as 63% of the graduates were unemployed and had to face the unemployment period during first twelve months predominantly. Females had a higher chance of being unemployed than males. It is indicated that higher optimistic level was positively associated with employee commitment. Female gender, less employment commitment, low grades, and higher age were statistically significantly related with unemployment in fresh graduates. It is also concluded that job search intensity and pessimism were strong independent predictors of psychological well-being. Most research and studies are needed on this issue to understand better the unemployment rate in fresh graduates and their mental consequences.

To maintain and prevent youth unemployment from soaring, it is essential to take immediate corrective measures so that the economy of Pakistan could withstand this reprehensible curse: Special internship program be launched so that students could acquaint themselves with experience side by side with their education, this will help to alleviate the hesitancy on the part of employers in hiring recent graduates. Merit system and unbiased selection should be served in centre and subunits of Pakistan. University faculty staff should offer career guidance for the outgoing students about where and how to apply for the job.

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