

Determining the Factors that Influence the Professional Achievement of the Department of Youth Development Trainee: A follow-up Study on the Trainee of two Computer-Based Courses at Dhaka Region.

Farzana Zannat Toshi¹, Syeda Afsana²

¹Lecturer, Department of Statistics, Begum Rokeya University, Rangpur, Bangladesh.

²Research Fellow, Department of Statistics, Begum Rokeya University, Rangpur, Bangladesh.

DOI: <https://dx.doi.org/10.47772/IJRISS.2024.801189>

Received: 10 January 2024; Accepted: 22 January 2024; Published: 24 February 2024

ABSTRACT

This study analyzes the factors affecting the performance of respondents trained under the DYD (the Department of Youth Development) computed project to enter the job market. The primary aim of this research is to evaluate the impact of computer courses provided by DYD in Dhaka city on the current job market. Though there are many factors in this sector, we focused on the factors influencing the trainee to build their career. 828 respondents from different institutions under the DYD computer training program at Dhaka were communicated over the telephone, and their opinions were analyzed using statistical software. In this work, seven key parameters for five distinct DYD institutions in the Dhaka region were considered, and the data was synthesized with the assumption of meta-analysis using the well-known fixed-effect approach. Furthermore, impact size and odds ratio have been combined in this study using the inverse variance approach. Further, Stouffer's method evaluates the significance of factors for overall studies. Hence, this research has provided a more secure conclusion for assessing the development of the trainee in their job field. Based on our findings, the youth have utilized this computer training to participate in many income-generating endeavors and have secured well-paying employment. This study finds that factors such as sex, the respondent's training period profession, the necessity of the training, the satisfaction of the respondent's present profession, and fulfillment of the training play a significant role in the respondent's professional success.

Keywords: Youth Training, Job Market, Professional Achievement, Youth Employment, Bangladesh.

INTRODUCTION

Youth unemployment has become alarming news for Bangladesh over the decade. According to reports, an additional one billion young individuals will enter the labor market, with only an estimated 40% being able to secure employment. Approximately 41% of the youth population in Bangladesh were classified as NEET (not in employment, education, or training), with 78% of these NEET individuals being unemployed. A significant majority of Bangladeshi youth, over 95%, engage in informal employment. Among them, a considerable portion is self-employed (31.7%) or involved in unpaid family work (11.1%). It is worth noting that gender discrimination is evident in Bangladesh, as young women bear the brunt of unemployment among the youth population, particularly among those who are not in education, employment, or training (NEETs). Approximately 50% of graduates in Bangladesh are unemployed, compared to 30% in India and Pakistan. This is concerning, especially considering that 5% of Bangladesh's total unemployment rate is

attributed to graduates. Considering this situation, the current Government's Digital Bangladesh declaration by Vision 2021. That means Information, Communication, and Technology (ICT) can increasingly significantly reduce the unemployment rate. It implies that the nation needs to be in 2021- the year marks the 50th anniversary of Bangladesh's independence through the practical and valuable use of computer-based technology to implement the promises in education, job placement, and poverty reduction.

To build up a digital Bangladesh, the DYD is working as an effective instrument of the ministry up to 2014, the DYD provided skill development training to about 42, 37,462 female and male youth people on different trades to make them skilled for their gainful employment or self-employment. Keeping in this view, the Department of Youth Development has been given computer training, including internet and networking. It is imparted to the youths of backward areas with the help of a mobile van equipped with computer and internet facilities, a multi-media projector, and an audio system. Every year, the DYD

launched a basic computer course and a computer graphics course in two sessions under the Assistant Director of the ICT sector in the Dhaka region. The broad objective of this paper is to assess the contribution of computer courses offered by DYD in Dhaka city towards the recent job market. Mainly, this paper tries to determine the influence of the significant factors on the trainee's professional success at different institutions under the DYD (Department of Youth Development) computer-based project and also makes a recommendation for policy implication based on the findings.

LITERATURE REVIEW

Literature related to skill and training enhancement programs for the youth is reviewed as follows:

Hagigi and Lin (2012) conducted a study that identified several factors influencing the motivation for entrepreneurship development in Bangladesh. These factors include the extent to which decision-making compensation is linked to decision success, the investment time horizon, the decision maker's experience, and the level of decision sharing or sole responsibility the decision maker bears. Bangladesh has the potential to leverage its people and terrain to foster the rise of entrepreneurship, leading to substantial economic development. Easin Ali et al. (2006) found that self-employed people have created additional work opportunities inside and outside their households in a separate study about the evaluation of the effectiveness of the ongoing DYD initiatives. Furthermore, a majority of well-educated and skilled young individuals have shifted their mindset towards entrepreneurship instead of seeking salaried work. Several participants expressed social difficulties due to the lack of alignment between their self-employment and family positions within the community. The study suggested the need for an umbrella coordinating framework to establish a connection between programs and facilitate functional connectivity across various levels of program execution.

According to Hytti and Gorman (2004), a nation's ability to compete with other countries depends on its general population's entrepreneurial skills. The skill base of the workforce and the ability of enterprises and individuals to engage in innovative economic activity are becoming increasingly crucial for a country's competitive edge. Hussain et al. (2016) examine various aspects of economic development. They analyze the real sector, focusing on growth, inflation, and poverty. They also investigate the external sector, paying attention to the balance of payment, foreign exchange reserves, and the exchange rate. Additionally, they study fiscal development, looking at revenue mobilization and public expenditure. Furthermore, they explore financial sector development, specifically credit and interest rates. Lastly, they analyze monetary development, including trends in reserve money and broad money growth. In a study conducted by Hossain (2010), it was argued that despite the Government of Bangladesh's efforts to create policies, plans, and programs for the well-being of the youth and implement them through governmental organizations (GOs) and non-governmental organizations (NGOs), existing literature indicates that young people in this country,

regardless of their age or location, encounter numerous socio-cultural challenges that hinder their proper development and empowerment. Therefore, he devised recommendations to address these issues affecting young people. Roy et al.'s (2013) study looks at the outcomes of the Bangladeshi government's attempt to evaluate the effectiveness of the Youth Entrepreneurship Development Program (YEDP) by examining the results of comparable programs. The study's data was gathered from both secondary and primary sources. The study's primary aim is to evaluate the efficacy and pertinence of the existing DYD (Department of Youth Development) programs concerning achieving the desired outcome.

METHODOLOGY

This study follows a quantitative research methodology. The data for this study has been collected by survey. In this survey, we have no sampling frame. So, it is not feasible, practical, or theoretically sensible to do random sampling. In this regard, we consider non-probabilistic alternatives for this study. Usually, nonprobability sampling deals with uncovering bias. So, we have tried to enumerate available information to reduce this type of bias completely. We have collected information from the listed respondents in the register book. To achieve the objectives of the study, a pre-coded questionnaire was designed, which includes the following information:

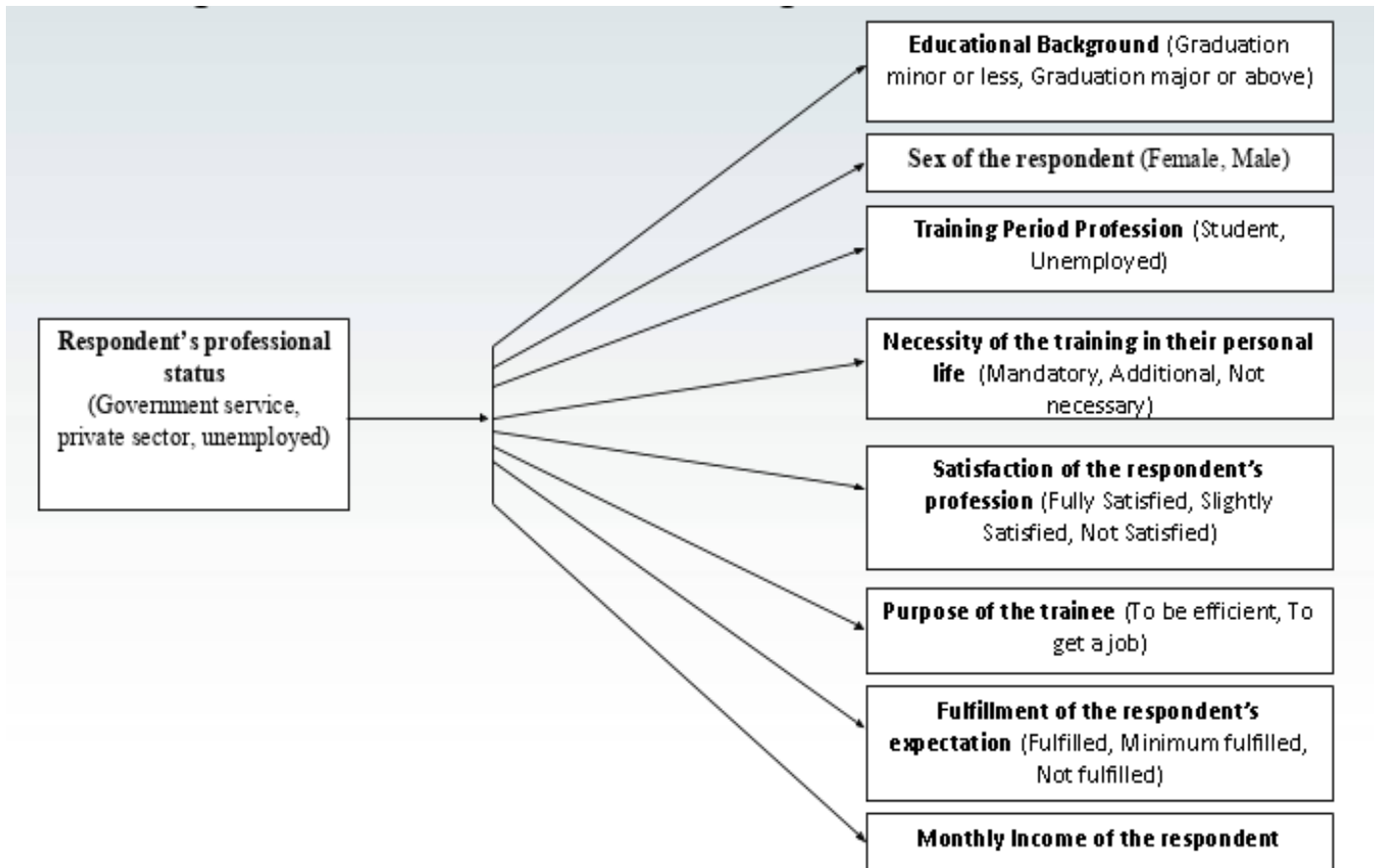


Figure -1: Define Influencing Variable

In this survey, respondents were asked through telephone by the use of both qualitative and quantitative questions. We chose this method since it is easy to collect data from a large population and also it is feasible to get through to the respondents. The interviewees were those who had already completed this training, the respondents were not available in their registered telephone numbers, and many female respondents did not feel comfortable sharing their personal information. A total of 828 responses were collected from different institutions. The following figure illustrates the process at a glance:

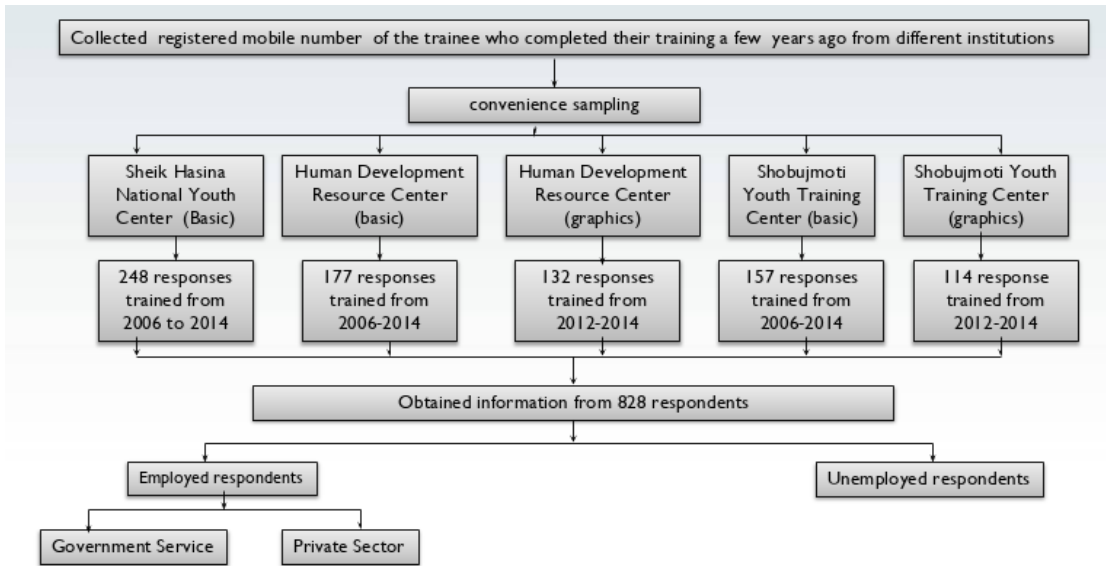


Figure -2: Sampling Scheme

RESULT

The findings are done to get the answers to the factors affecting the trainee’s professional achievement in different institutions under the DYD project. Here we describe the details of the information of the institute-organized computer-based training program. The following figure shows the distribution of the respondents by some characteristics. The following chart shows the outcomes more clearly



Figure 3: Bar diagram of different characteristics at different institutions

Multinomial Logistic Regression Analysis:

Given that the dependent variable, the respondent’s professional status takes the form of an unordered categorical response variable, we chose to use a multinomial logistic regression approach. Let Y be a categorical response variable with J categories. This model for nominal response variables simultaneously describes log odds for and all $\binom{J}{2}$ pairs of categories.

In this analysis, the present profession of the respondent has considered a categorical response variable has three categories. That is Y is classified as follows-

$$Y = \begin{cases} 2; & \text{if the respondent engaged in govt sector} \\ 1; & \text{if the respondent worked in private sector} \\ 0; & \text{if the respondents are jobless} \end{cases}$$

Here we considered jobless respondents as the baseline category.

Multinomial parameters for k outcomes are usually estimated using the maximum likelihood method (MLE). The ML solution of multinomial parameter π_j satisfies that

$$\frac{\hat{\pi}_j}{\pi_c} = \frac{n_j}{n_c}$$

So $\pi_c = \frac{n_c}{n}$ and $\pi_j = \frac{n_j}{n}$ where $\sum_j \hat{\pi}_j = \frac{\hat{\pi}_c n}{n_c} = 1$

Now, we consider the null hypothesis –

$$H_0: \pi_j = \pi_{j0}; \text{ where } j = 1, 2, \dots, \dots, \dots, c$$

If is true, then we can apply the following test such as –

For multivariate extension, the test statistic is given by

$$W = (\hat{\beta} - \beta_0)' [cov(\hat{\beta})]^{-1} (\hat{\beta} - \beta_0)$$

The nonnull covariance $v(\hat{\beta})$ is based on the information matrix of the log-likelihood b beta $\hat{\beta}$. The asymptotic multivariate normal distribution for $\hat{\beta}$ implies an asymptotic chi-squared distribution for W. The degree of freedom equals the rank of, which is the number of nonredundant parameters in β .

The Wald 95% CI is the set π_0 of values with p value > 0.05, where

$$\hat{\beta} \pm z_{\alpha/2} SE(\text{standard error})$$

For evaluating the goodness of fit test, we consider Pearson test statistic is based on expected frequencies where $\mu_j = n\pi_{j0}$;

$j = 1, 2, \dots, \dots, \dots, c$. Pearson proposed that –

$$\chi^2 = \sum_j \frac{(\text{observed} - \text{expected})^2}{\text{expected}}$$

Let denote the observed value of X^2 . The P-value is the null value of $P(\chi^2 \geq \chi_0^2)$ which equal the sum of the multinomial distribution. For a large sample, has approximately a chi-square normal distribution with $DF=c- 1$.

We also use deviance as a goodness-of-fit statistic for UMLR. The test statistic is

$$G^2 = -2 \log \left(\frac{\text{maximumlikelihoodwhen}H_0\text{istrue}}{\text{maximumlikelihoodgenerally}} \right) = 2 \sum_{ij} n_{ij} \log \left(\frac{n_{ij}}{\hat{\mu}_{ij}} \right)$$

Distribution of G^2 under H_0 is approximately chi-squared $df=(I-1) (J-1)$

We implemented a multinomial logistic regression model for the present profession of the respondent.

Table-2: shows the multinomial logistic regression for conditional odds ratio and confidence interval of the respondent’s professional achievement

Variable		SHNYC(Basic)		HDRC(Basic)		HDRC(Graphics)		SMYTC(Basic)		SMYTC (Graphics)
		Private Sector	Govt Service	Private Sector	Govt Service	Private Sector	Govt Service	Private Sector	Govt Service	Private Sector
Educational	Graduate minor or less	3.554* [1.09-11.49]	1.923 [0.50-7.45]	1.817 [0.482-6.85]	0.821 [0.18-3.70]	4.112* [0.91-18.63]	0.603 [0.048-7.85]	0.291 [0.075-1.13]	0.424 [0.11-1.73]	3.433 [0.63-18.74]
Background	Graduation major or above	1	1	1	1	1	1	1	1	1
Sex	Male	4.984** [1.88-13.21]	12.392*** [4.18-36.75]	6.513** [1.90-22.32]	1.791 [0.459-6.98]	1.452 [0.44-4.75]	0.432 [0.107-1.74]	8.321* [1.52-45.50]	3.488 [0.67-18.22]	73.135*** [6.39-836.24]
	Female	1	1	1	1	1	1	1	1	1
Profession during training	Student	3.791* [0.95-15.15]	0.875 [0.17-4.38]	0.093** [0.017-0.505]	0.035*** [0.006-0.211]	0.042** [0.004-0.43]	0.031* [0.01-0.346]	0.099* [0.018-0.555]	0.207 [0.035-1.21]	0.117* [0.02-0.68]
	Unemployed	1	1	1	1	1	1	1	1	1
Necessity of the training	Mandatory	1.751 [0.49-6.32]	23.224*** [4.63-116.39]	6.158** [1.33-28.46]	16.461** [2.44-110.85]	6.599* [1.54-28.36]	7.188* [1.19-43.39]	2.551 [0.53-12.43]	18.123** [2.69-121.89]	0.06* [0.005-0.66]
	Additional	1.082 [0.316-3.71]	10.447** [2.11-51.73]	1.815 [0.46-7.19]	4.984 [0.821-30.24]	2.12 [0.61-7.43]	1.824 [0.34-9.77]	7.2* [1.49-34.78]	62.55*** [8.13-481.07]	0.17 [0.021-1.35]

	Not necessary	1	1	1	1	1	1	1	1	1
Satisfaction of their profession	Satisfied	16.074***	44.693***	33.134***	13.717**	16.298**	3.39	56.581***	31.98***	13.188**
		[5.39-47.91]	[10.64-187.73]	[6.77-162.07]	[2.61-71.97]	[3.93-67.46]	[0.688-16.69]	[10.97-291.79]	[5.79-176.37]	[2.53-68.85]
	Slightly Satisfied	6.234**	28.355***	47.116***	0.713	8.043*	0.801	68.844***	3.341	17.95*
		[1.78-21.47]	[5.96-134.81]	[8.03-276.61]	[0.051-9.93]	[1.62-39.76]	[0.098-6.55]	[9.55-496.09]	[0.44-25.16]	[1.25-257.063]
	Not satisfied	1	1	1	1	1	1	1	1	1
Purpose of the training	To be efficient	1.34	0.798	0.563	3.112	0.612	1.144	1.416	0.086**	0.938
		[0.40-4.44]	[0.231-2.75]	[0.18-1.78]	[0.891-11.82]	[0.17-2.12]	[0.24-5.30]	[0.346-5.79]	[0.017-0.45]	[0.121-7.26]
	To get a job	1	1	1	1	1	1	1	1	1
Fulfillment of their expectation	Fulfilled	0.218*	0.29	2.829	1.827	1.786	1.127	0.202*	0.911	83.65***
		[0.06-0.82]	[0.06-1.40]	[0.67-12.19]	[0.29-11.32]	[0.25-12.52]	[0.08-15.36]	[0.04-0.97]	[0.17-4.77]	[6.944-1007.65]
	Minimum fulfilled	0.24*	0.238	6.15*	4.263	1.278	0.903	0.406	0.252	14.288*
		[0.06-0.97]	[0.04-1.29]	[1.14-33.34]	[0.56-32.35]	[0.18-9.19]	[0.06-13.01]	[0.09-1.78]	[0.04-1.55]	[1.56-130.87]
	Not fulfilled	1	1	1	1	1	1	1	1	1

Note: Significance level: *p<0.05, **p<.01, ***p<.001, Baseline category: Jobless People

META-ANALYSIS:

We found it challenging to identify the most significant factors in the employment generation by applying the classical approach since different training courses from different institutions come to different conclusions. So, meta-analysis is the best evidence synthesis to estimate the unknown common truth. In this regard, it is needed to decide which dependent variables or summary measures can be allowed.

When the research question focuses on the degree of association between two binary variables, then it is appropriate to measure the odds ratio by using **Wolfe method** (Wolf et al. 1996). In this method, we initially work with the log of the odds ratio directly estimated from the logistic model. Using wolf method, we compute the standard error of odds ratio with the following equation –

$$SE(\log \hat{\theta}) = \sqrt{\frac{1}{n_{11}} + \frac{1}{n_{12}} + \frac{1}{n_{21}} + \frac{1}{n_{22}}}$$

CI for $g\hat{\theta}$ can be written as

of CI of $\log\theta = \log\hat{\theta} \pm z\alpha/2 SE(\log\hat{\theta})$ Finally, CI of odds ratio, $\theta = (e^L, e^U)$

here $e^L = e^{\log\hat{\theta} - z\alpha/2 SE(\log\hat{\theta})}$

$e^U = e^{\log\hat{\theta} + z\alpha/2 SE(\log\hat{\theta})}$

The selection of a model must be based on the question of which model fits the distribution of effect sizes and takes account of the relevant source of error. So, the strategy of starting with a fixed effect model if there exists a common effect and then moving to a random effect model if the test of heterogeneity is significant.

Cochran's Q test is a nonparentetical statistical t.(Willam G. Cochran, 1950). It is computed by $he Q = \sum W_i (Y_i - M)^2$

Here

Y_i is the effect size estimated from $tud iW_i$ ie weight of studder fifect model M is the effect nect model 95% confidence interval for the summary of the fact is given $y -CI = M \pm 1.96 \times SE_M$ ere

SE_M is the standard error of summary effect, $SE_M = \sqrt{\frac{1}{\sum_{i=1}^k W_i}}$

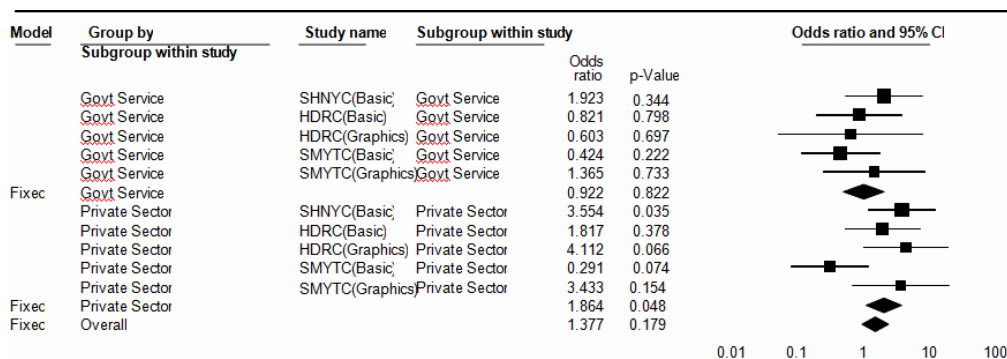
The standard error of the summary effect and the confidence interval for the summary effect are wider under the random effect model than under a fixed effect model.

Using Stouffer's method, we can easily evaluate the significance of categorical moderators described in the previous chapter. Here we calculate a normal variate Z_i from each p-value and compute –

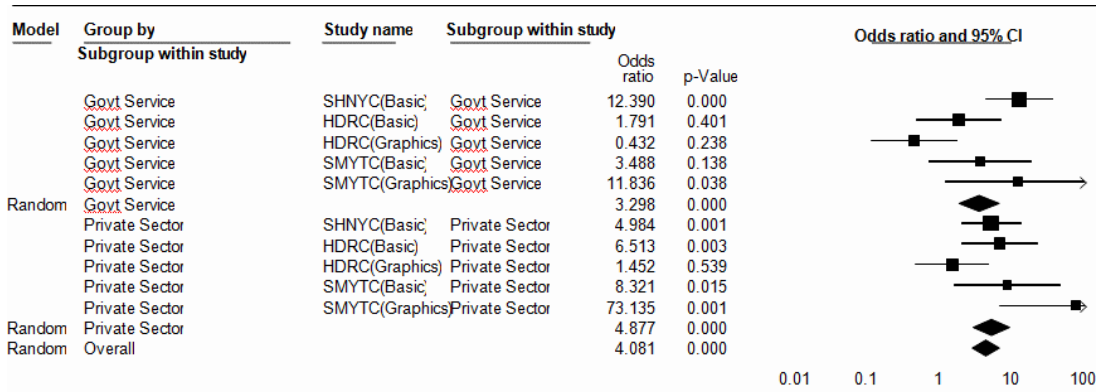
$$Z_{Stouffer} = \frac{\sum_i^k Z_i}{\sqrt{k}}$$

Where k is the number of studies. Under the null hypothesis of no effect in every study, $Z_{Stouffer}$ follows anormal distribution, so we can report a p-value for the aggregated evidence across the studies.

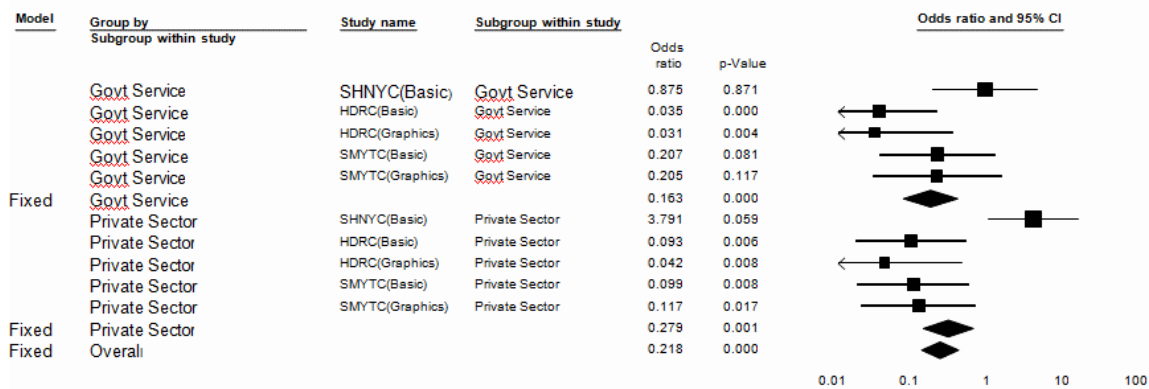
Forest plots typically show the numerical data supporting Figure 4. This can include the number of events that occurred in each group from each study (n/N), the actual percentage weighting value assigned to each study, the numerical value of the ratio and its confidence interval, and statistical test results for overall effect and heterogeneity.



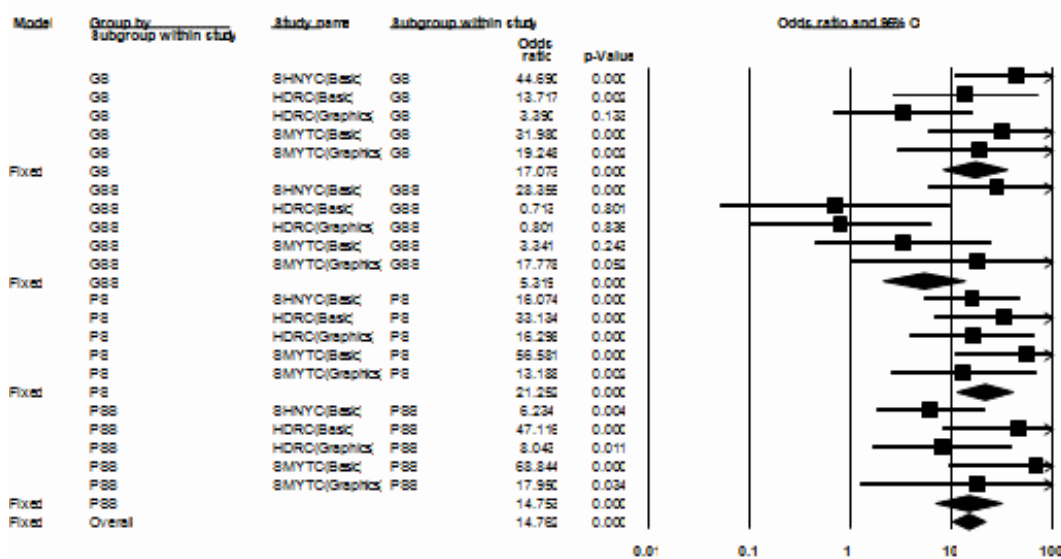
Educational Background of the respondent



Sex Ratio of the respondent



Training Period Profession of the respondent



Satisfaction level of the respondent

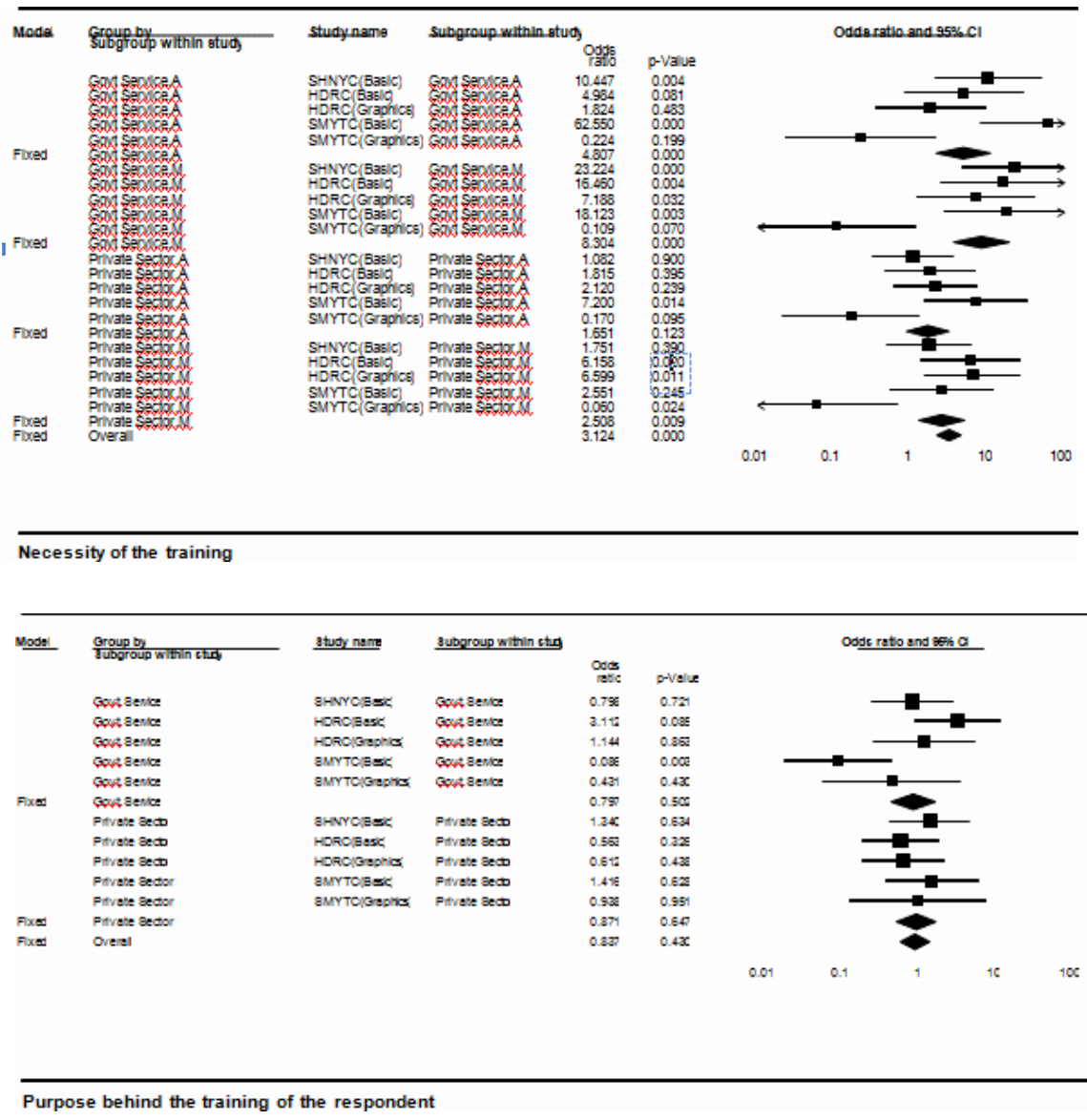


Figure 4: Forest Plot of the influential factors

Table: represents the summary odds ratio of different characteristics that are found in our previous studies:

	Govt Service	Private Sector	Combined
Educational Background	0.922 [0.453-1.876]	1.864* [1.005-3.459]	1.377 [0.864-2.195]
Sex	3.298*** [1.741-6.264]	4.877*** [2.720-8.745]	4.081*** [2.652-6.280]
Profession during training	0.163*** [0.071-0.374]	0.279** [0.130-0.599]	0.218*** [0.124-0.383]

Necessity of the training	8.304*** [3.585-19.233]	2.508* [1.253-5.017]	3.123*** [2.53-5.96]
	4.806*** [2.115-10.919]	1.65 [0.873-3.123]	
Satisfaction with their profession	17.073*** [8.202-35.54]	21.25*** [11.244-40.168]	14.762*** [10.176-21.414]
	5.319*** [2.089-13.542]	14.753** [6.933-31.395]	
Purpose of the training	0.797 [0.411-1.546]	0.871 [0.481-1.575]	0.837 [0.538-1.302]
Fulfillment of their expectation	1.133 [0.491-2.610]	0.916 [0.441-1.904]	0.878 [0.59-1.305]
	0.476 [0.196-1.155]	1.057 [0.50-2.237]	

Note: Significance level: * $p < 0.05$, ** $p < .01$, *** $p < .001$, Baseline category: Jobless People

DISCUSSION

In this research, the proposed theory (Breslow & Day, 1980) was measured practically to examine the factors influencing the respondents' professional success through traditional **multinomial regression**. However, there is a phenomenon arising from multivariate statistical analyses (Pearl, 2009; Wagner, 1982) that leads to paradoxical conclusions. Such conclusions may lead to the development of theories that incorporate causal effects disconnected from reality, based on empirical findings distorted by **Simpson's paradox**. In this circumstance, the **meta-analysis** approach allows us to study this paradoxical effect (Farrel, & Egger, 2000) and makes the process more transparent and less subject to relativity. In this study, we have considered the odds ratio as effect size individually for different institutions under the DYD project and further combined the effect sizes by **inverse variance method**.

In terms of education, it was discovered that approximately 30% of the beneficiaries had graduated with minor or lower-level education, while the remaining 70% had earned major or above-level education. Graphics computer classes are popular in this small association. In the private sector, the significant odds ratio of graduating with a minor or less is 3.554, 4.112 for computer courses at SHNYC (basic), and HDRC (graphics). Furthermore, the overall effect is negligible.

According to available information, it is evident that the participation ratio of males is about 2 times that of females (except SHNYC (basic)). Many of the female were not interested in sharing their information. This

may be a reason behind this. The factor “Sex” is significant in all institutions. The significant odds ratio of males is 6.513, 4.984, 8.321, 73.135 for the institutions SHNYC (basic), HDRC (basic), SMYTC (basic), and SMYTC (graphics) respectively in the private sector. For the government employee, this factor seems insignificant. The overall effect of this factor is 4.081 which is highly significant. That means male are 82% more likely to develop their profession.

Considering the trainee’s profession during the training period, we found that students are more interested in participating in this training than unemployed people. The odds ratio of the respondents who were students during the training period are 0.035, and 0.031 for HDRC (basic) and HDRC (graphics) respectively in the government sector, but for the private sector, it is found almost significant. Here the overall effect is 0.281 i.e. the trainee who was a student during the training has a 28.10 % lower probability to get a job.

Out of the 828 stakeholders that were chosen, it was discovered that about 50% (excluding SHNYC (basic) and SMYTC (basic)) had worked in the private sector. Just one-third of trained adolescents in their field indicated that this training was required, while another third indicated that it was optional. For the government sector, the significant odds ratios for the training necessity are 23.224, 16.461, 7.188, and 18.123 for the following institutes: SHNYC (basic), HDRC (basic), HDRC (graphics), and SMYTC (basic). The respondent who might employ this training in their personal life has a 3.72 times higher probability to advance in their job, according to the combined effect of these institutions under the DYD project, which is 3.123.

Approximately 60% of the youth participants are satisfied with the quality of the training they received from these schools. We discovered a significant relationship for all institutions (excluding SMYTC (graphics)). The aggregate effect of their satisfaction level is 14.762, which means that a respondent who is satisfied with this training has a 14.762 times greater likelihood of success in their professional life. When we asked them about their training goals, almost 70% (except for SMYTC (basic)) said they had been met. In this sense, implementing essential actions can play a critical role in furthering computer program improvement. According to our statistical investigation, this aspect has no substantial effect on the trainee’s professional accomplishment.

However, the fulfillment of the respondent’s expectation reflects a significant effect on the trainee’s professional success. The odds ratio of the respondent who opined that this training has successfully fulfilled their expectation is 0.202, 0.218, 83.65 for the institute SHNYC(basic) SMYTC(basic), and SMYTC(graphics) respectively in the private sector. The overall effect of their fulfillment is 0.878 which is insignificant.

According to our research, the young people have used this computer training to engage in a variety of income-generating activities and have found jobs that pay well. Therefore, this training procedure needs to be improved in order to give many young people the opportunity to participate and support their families through income-generating activities.

RECOMMENDATIONS

When the trained youngsters in this course were asked to rate the training’s quality, 23.4% said it was satisfactory. Others, however, provide crucial suggestions. Based on the responses, the following measures are recommended to improve training quality, strengthen post-training utilization measures, and also to inform the youth about the evolution of the effectiveness of basic computer training courses in various institutions participating in the DYD project –

- The fundamental computer software on which the learner is trained does not represent the actual job market requirement. They were unable to manage their jobs. As a result, it is vital to look for new

trades for the training program in order to increase interest in the training job. On the other hand, we see that graphics-trained respondents began with a small-scale microcredit enterprise.

- Employment opportunities in the formal sector do not grow at the same rate as the number of unemployed youths. As a result, it is critical to foster self-employment opportunities. Many government and non-government entities must focus on collateral-free financing schemes in this context. To create youth empowerment, the respondent's expression was slightly reserved about the quality compared to private organizations. About 18.8% of trained youth opined that this program could be updated, widening its scope.
- It was discovered that around 84.2% of trainees advised enhancing SHNYC's networking system. They also urge that the course pattern be redesigned. As a result, the authorities should take note of this.
- < UNK > Our findings show that around 53.3% of respondents expressed that the duration of the training period is too long. The DYD can shorten the training period from 6 to 3 to 4 months. In this regard, the respondent also gave alternative suggestions, such as more topics in the syllabus during the scheduled period could be included.
- To improve the efficiency of this training, the various institutions involved in the DYD project should be provided with an adequate number of computers. Furthermore, we heard from participants that there are some malfunctioning machines. As a result, the authorities should repair these faulty machines.
- According to our findings, almost 70% of respondents have worked in various occupations despite having a bachelor's degree or less. In this context, DYD should devise a system to expand the participation of this level of youth to a higher degree.
- To encourage and boost participation at the grassroots level, the DYD might use mass media to promote the benefits of this training.
- To ensure the quality of this training, the overall training budget must be increased. This viewpoint is shared by around 97.8% of respondents.
- At the upazila level, the computer training program should be launched. This would improve the project's effectiveness even more.

LIMITATIONS OF THE STUDY

Data collection is one of the essential parts of this study. Quality data is vital for providing valuable and meaningful information for any investigation. However, during the present study, we faced the following problems in collecting data: this is a follow-up investigation study and as the respondent of this study after completing their training program.

- The researcher contacted the respondent through mobile phone. So, some of the respondents were not eager to provide their personal information.
- The authority could not provide us with any contact number of the trainee who has completed their training before 2006. They do not even have any registered contact numbers of all the respondents from that period.
- We have collected information from even 10 years past. Some of the respondents forgot the institute's atmosphere at that time and did not know about the present condition.
- During data collection, most of the respondents did not provide the correct information regarding their age and present income.
- Some of the respondents hesitate to give information about the questionnaire.
- The time was not sufficient for this study.

However, we have tried our best to complete the report correctly to avoid this limitation. In this case, we use different website addresses to collect information on the Department of Youth Development (DYD).

REFERENCES

1. Agresti, A. (2002). *Categorical Data Analysis*. Wiley Series in Probability and Statistics. New York: WILEY- INTERSCIENCE.
2. Ali, M. E., Roy, M. K., & Bhattacharjee, M. K. (2006). *Effectiveness of the ongoing Programs of the Department of Youth Development*. BARD, Comilla, 138pp.
3. Asadullah, M. N. (2014, may 1). Is graduate unemployment rate is really 47%? *The Daily Star: e paper*. <https://www.thedailystar.net/is-graduate-unemployment-rate-really-47-22302>
4. Breslow, N.E., & Day, N.E. (1980). *Statistical Methods in Cancer Research*. International Agency for Research on Cancer. Lyon: UK.
5. Cochran, W. G. (December 1950). The Comparison of Percentages in Matched Samples. *Biometrika*. 37 (3/4). Pp 256–266.
6. Farrel. N. O., & Egger, M. (2000). Circumcision in men and the prevention of HIV infection: a “meta-analysis” revisited. *Int J STD AIDS*, 11, 137-142.
7. Hagigi, M., & Lin, L. (2012). Attitude Towards Risk and Entrepreneurship Development in Emerging Economics: The Case of Bangladesh. *Independent Business Review*, 5(1). edge & Sidh (1960). *Youth You Work*. London: The Pilgrim Press, 1-10.
8. Hossain, M. A. (2010). Youth Problems, Their Development, and Empowerment in Bangladesh. *Antrocom Vol. 6, No. 1*. Pp. 65-77.
9. Hytti, U., & Gorman, C. (2004). What is enterprise Education? An analysis of the Objectives and methods of Enterprise Education Programs in four European Countries. *Education & Training* 46(1), 11-23.
10. Pearson, K., Lee, A., and Lesley, B. (1899). “Genetic (reproductive) selection: Inheritance of fertility in man, and of fecundity in thoroughbred racehorses”. *Philosophical Transactions of the Royal Society*. 192: 257-330
11. Pearson, K. (1904). Report on certain enteric fever inoculation statistics. *BMJ*. 2 (2288): 1243–1246.
12. Roy, M. k., and Bhattacharjee, M. K. (2013). Youth Entrepreneurship Development Through Training: An Evaluation. *Independent Business Review, Volume 6, Number 2, July 2013*. Pp: 94-120.
13. Simpson, E. H. (1951). The Interpretation of Interaction in Contingency Tables. *Journal of the Royal Statistical Society, Series B*. 13. Pp 238–241.
14. Wagner, C.H. (1982). Simpson’s paradox in real life. *The American Statistician*, 36(1), Pp: 46–48.
15. Wolf, J. S., and Smith, D. S. (1996). Practical biomedical statistics, a guide to the selection of statistical tests. *Urology* 1996:47. Pp: 2–12.
16. World Bank and Solution for Youth Employment (S4YE). (May 2015). *Toward Solutions for Youth Employment: A 2015 Baseline Report*. World Bank, Washington, DC.
17. World Bank Group. (April 2016). *Bangladesh development Update: Moving forward with fading tailwinds*. <https://documents1.worldbank.org/curated/fr/835401468193768661/pdf/105134-WP-PUBLIC-Bangladesh-Development-Update-April-2016.pdf>