

Volume XXIII, No 3, 2015 (December)

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# The Journal of Humanities and Social Sciences

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**Faculty of Arts and Humanities  
University of Peshawar**

ISSN 1024-0829

*The Journal of Humanities and Social Sciences*  
Faculty of Arts and Humanities, University of Peshawar,  
Peshawar, 25120, Khyber Pakhtunkhwa, Pakistan

ISSN: 1024-0829

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ISSN 1024-0829

# THE JOURNAL OF HUMANITIES AND SOCIAL SCIENCES

Volume XXIII, No. 3, 2015 (December)



Editor

Rubina Rahman

MSc (Edinburgh); PhD (Peshawar)

Faculty of Arts and Humanities  
University of Peshawar

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*The Journal of Humanities and Social Sciences* (JHSS), a refereed and internationally indexed journal recognised by the HEC, is published **triennially** (April, August, and December) by the Faculty of Arts and Humanities, University of Peshawar, with the approval of the competent authority. No part of the material published in this journal be reproduced, reprinted, or copied without the prior permission of the editor.

**Subscription Rate per Three issues:**

Domestic: Pak Rs. 3,000.00

Overseas: US \$ 90.00

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Journal of  
**Humanities &  
Social Sciences**

JHSS XXIII, No. 3, 2015 (December)

## Does Efficient Management of Working Capital have a Parallel Impact on the Profitability of Small and Large Firms?

Mustafa Afeef<sup>a</sup>, Kausar Takreem<sup>b</sup>, Qadar Bakhsh Baloch<sup>c</sup>

<sup>a</sup> Iqra National University, Hayatabad, Peshawar, Pakistan

<sup>b</sup> College of Home Economics, University of Peshawar, Peshawar, Pakistan

<sup>c</sup> National University of Modern Languages, Peshawar Campus, Peshawar, Pakistan

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### Abstract

Working Capital Management has an overriding impact on a firm's profit performance. However, the profitability of large firms, unlike small ones, might show a different degree of sensitivity to the efficient management of working capital. One wonders as to which category of firms (small or large) exhibit more escalation in their profitability as a result of a decent management of their working capital. Exploring the answer to this query is the foremost aim of the present work. To investigate, effect of working capital management was determined on profitability of small and large organizations separately and their results were compared. Findings from the comparison suggested that indicators of working capital management had a more perceptible impact on profitability of firms of relatively larger size. It is, thus, suggested for managers of large-sized corporations to redouble their thought on effective and vigilant management of their working capital so as to invigorate profitability.

**Keywords:** Working Capital Management, Cash Conversion Cycle, Inventory Conversion Period, Receivable Collection Period, Payable Deferral Period, Return on Assets

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*JEL Classification Codes:* G30, L25



## 1. Introduction

Working Capital Management is one of the most imperative and crucial aspects of short-term financial matters of an organization. Firms of all sizes demonstrate sensitivity of their profit performance to the efficient management of their working capital. However, which category of firms (small or large) exhibit relatively more responsiveness to proficient working capital management is obscure. Presumably small firms and large firms are different from each other in that working capital management may affect more (or less) the profitability of one or the other. This paper is aimed at separately determining the effect of Working Capital Management on Profitability of *small* and *large* firms listed in Karachi Stock Exchange, and then comparing the results so derived to reveal the difference, if any, in the respective *response* of their profitability towards a skilful working capital management. Besides, an attempt is also made to discretely elucidate the influence of *Liquidity* on profitability of small and that of large companies both listed at Karachi Stock Exchange and then to compare the respective effects of the two distinct organization types.

It is expected that working capital management might have a more profound impact on profitability of small enterprises than on the performance of larger companies since a substantial proportion of the total assets of small and medium firms is constituted of the *Current Assets* and a sizeable fraction of their total liabilities is consisted of the *Current Liabilities*. And, of course, the management of working capital is all about the management of a firm's current assets and current liabilities. With this in mind, the hypotheses for the study are, thus, formulated as follows:

## 2. The Hypotheses

The first hypothesis developed for the study is:

*H<sub>0.1</sub>: Working Capital Management has no relevance to Profitability of Small and Medium-sized corporations listed at Karachi Stock Exchange.*

*H<sub>1.1</sub>: An efficient management of Working Capital may have a significant relationship with the Profitability of Small and Medium-sized corporations listed at Karachi Stock Exchange.*

The second hypothesis developed for the study was:

*H<sub>0.2</sub>: Working Capital Management has no relevance to Profitability of Large Joint Stock Companies listed at Karachi Stock Exchange.*

*H<sub>1.2</sub>: An efficient management of Working Capital may have a significant relationship with the Profitability of Large Corporations listed at Karachi Stock Exchange.*

The third hypothesis developed for the study is:

*H<sub>0.3</sub>: There is no substantial distinction between the effect of Working Capital Management on the Profitability of Small and Large Corporations listed at Karachi Stock Exchange.*

*H<sub>1.3</sub>: Working Capital Management has a significantly different effect on the Profitability of Small and Medium Enterprises than of Large Corporations listed at Karachi Stock Exchange.*

The fourth hypothesis developed for the study is:

*H<sub>0.4</sub>: There is no substantial distinction between the impact of Liquidity on the Profitability of Small and Medium Enterprises, and that of Large Corporations listed in Karachi Stock Exchange.*

*H<sub>1.4</sub>: Liquidity has a significantly different impact on the Profitability of Small and Medium Enterprises than of Large Corporations listed in Karachi Stock Exchange.*

### **3. Justification and Likely Benefits**

Presumably this paper will add to the existing relevant literature as no study is so far known to have been conducted with the aim to determining and *comparing* the effects of Working Capital Management on the Profitability of Small-sized and Large-sized organizations, and that within the same region (where all other profit-determining factors are the same). The study will insistently offer a better illustration of whether Working Capital Management varies in its worth and potential impact for *small* and *large* organizations.

### **4. Review of Literature**

There has been some work previously done on the relationship between Working Capital Management and its influence on profitability of companies. Many researchers have recognized the effect of a sensible management of working

capital on corporate performance. The ensuing lines enclose some of the research findings of the previously done work on this and the related topics:

Shin and Soenen (1998:44) were probably among the pioneers to relate efficient management of working capital with enhanced profitability. They found that a reasonable reduction in the Cash Conversion Cycle could lead to an increase in the firms' Profitability.

Vishnani and Shah (2007:201) made a pragmatic analysis of Indian Consumer Electronics Industry to determine the impact of working capital policies & practices on profitability for the period 1994–95 to 2004–05. They found a negative relationship between the determinants of WCM and profitability for most of the companies in their sample. In another related paper written by Lazaridis and Tryfonidis (2006:34), profitability was found to be statistically significant with the cash conversion cycle of firms listed in the Athens Stock Exchange for the period 2001-2004.

Ramachandran and Janakiraman (2009:73) also attempted to devise a significant relationship between the Working Capital Management Efficiency and EBIT. The results of their Regression analysis showed a significant negative relationship of EBIT with Cash Conversion Cycle.

One of the very few efforts made in Pakistan with the aim to assess the impact of Working Capital Management on Profitability was that initiated by Rehman and Nasr (2007) of COMSATS Institute of Information Technology, Islamabad. They took a sample of 94 Pakistani non-financial firms listed in Karachi Stock Exchange for a period of six years from 1999 to 2004. The results of their analyses demonstrated a very strong negative relationship between the determinants of working capital management and that of profitability. In addition to that, they also found a significant negative relation between the liquidity and profitability of firms in their sample (Rehman and Nasr (2007:299).

Mukhopadhyay (2004:74) indicated, in his article "Working Capital Management in Heavy Engineering Firms—A Case Study", that no significant role did current assets play in the profit maximization of the firms under study. A study with a view to analysing the relationship between working capital management efficiency and corporate profitability in the Indian Cement Industry was conducted by Ghosh and Maji. Their results depicted a significant association between effective and efficient use of current assets and profitability (Ghosh and Maji,2003:370).

Govind Rao and P. M. Rao (1999:258) researched the relationship of WCM and profitability in Indian cement industry and found a mix of positive and negative connections between the working capital related variables and that of profitability.

Vijaykumar and Venkatachalam (1995:383) explored a negative correlation between liquidity and profitability in the Tamil Nadu Sugar Industry. On the other hand, Bardia (2004:312) discovered a positive relationship between liquidity and profitability in the steel giant SAIL for the period 1992-2002. Narware (2004:127), however, found both positive and negative interrelationship between working capital management and profitability in a fertilizer company, NFL.

Singh (2008:73) observed that the level of Inventory had a profound influence on the management of working capital. He stressed on the need to prudently handle the Inventory. Singh and Pandey (2008:72), in their article “Impact of Working Capital Management in the Profitability of Hindalco Industries Limited” observed a significant effect of the management of working capital on the profitability of Hindalco Industries.

## 5. Plan of Work and Methodology

This research work investigates and compares the relationship of Corporate Profitability and Working Capital Management in *small* and *large* listed companies of Karachi Stock Exchange for a period of six years from 2003 to 2008. The data for this purpose was acquired from an official and legitimate document titled, “*Balance Sheet Analysis of Joint Stock Companies Listed on the Karachi Stock Exchange --- (2003-2008)*”, formally published by the Statistics and DWH Department of the State Bank of Pakistan (SBP). This document contained the Balance Sheet analysis of all the *non-financial firms* listed on the Karachi Stock Exchange as at June 30, 2008. Hence the research was entirely based on the *Secondary data*. Firms of various economic groups and sectors were included in the document including Cotton and Other Textiles, Chemicals, Engineering, Sugar and Allied Industries, Paper & Board, Cement, Fuel & Energy, Transport & Communication, Tobacco, Jute, Vanaspati & Allied Sector and others. It should be mentioned that the *financial corporations* like Banking Companies, Insurance Companies, Leasing Companies and Modarabas were not included in this study due to their distinctively dissimilar nature of business in comparison with the *non-financial*/business entities.

There were a total of 436 non-financial companies listed on the Karachi Stock Exchange as at June, 2008 as per the analysis published by the State Bank of Pakistan. Out of these, 93 were found to be small or medium-sized companies as

per the SBP's *SME Prudential Regulations* and the remaining were large corporations.

## 6. The Samples

There were two distinct samples used in the study --- sample 1 for small and medium firms listed in Karachi Stock Exchange and sample 2 to represent large companies listed at KSE. The size of sample 1 was dependent on the availability of complete financial data of SME's in the source document published by SBP. As mentioned earlier, there were a total of 93 small and medium-sized non-financial firms listed in KSE. However, only 40 out of them had complete set of data required for the study, i.e., the data for each year from 2003 to 2008. Hence, analyses of all the 40 firms (having thorough six year financial data) were made for six years ranging from 2003 to 2008 that led to a total of 240 firm-year observations.

As for Sample 2, 30% of all the large non-financial firms listed in KSE were figured out. However, in order to select the *largest* firms listed in KSE for the sample, all the listed firms were rolled in a descending order based on their average annual gross sales amount and the top 30% firms as per the firm-size parameter were included in Sample 2. The reason for selecting the largest companies in sample 2 was to expand as much as possible the *size gap* between the firms of the two samples so as to get more perceptible and meaningful results, or, in other words, to be able to study the *change* in the impact of Working Capital Management on Profitability that could result due to a change in the *Size* of the firms based on their Sales Volume.

There were a total of 343 large non-financial firms listed in KSE as at June, 2008. Sample 2 included thirty percent of 343 firms or 103 firms for analysis. Hence, an aggregate of 618 firm-year observations was made with observations of each firm for six years ranging from the year 2003 to 2008.

## 7. The Regression Model

The Multiple Regression analysis was employed in the study to explore the combined effect of the variables of working capital management on profitability.

The Regression Equation for Sample 1 follows:

$$ROA_{ot} = \beta_0 + \beta_1(RCP_{ot}) + \beta_2(ICP_{ot}) + \beta_3(PDP_{ot}) + \beta_4(CCC_{ot}) + \beta_5(CR_{ot}) + \beta_6(LNS_{ot}) + \beta_7(SG_{ot}) + \beta_8(FL_{ot}) + \varepsilon$$

The Regression Equation for Sample 2 is:

$$ROA_{pt} = \beta_0 + \beta_1(RCP_{pt}) + \beta_2(ICP_{pt}) + \beta_3(PDP_{pt}) + \beta_4(CCC_{pt}) + \beta_5(CR_{pt}) + \beta_6(LNS_{pt}) + \beta_7(SG_{pt}) + \beta_8(FL_{pt}) + \varepsilon$$

Where:

$ROA_{ot}$  = Return on Assets of firm  $o$  at time  $t$ ;  $o = 1, 2, 3, \dots, 40$  Small firms listed in Karachi Stock Exchange

$ROA_{pt}$  = Return on Assets of firm  $p$  at time  $t$ ;  $p = 1, 2, 3, \dots, 103$  Large Companies listed in Karachi Stock Exchange

- $\beta_0$  = The intercept of equation
- $t$  = Time = 1,2,3, ..., Years
- RCP = Receivable Collection Period
- ICP = Inventory Conversion Period
- PDP = Payable Deferral Period
- CCC = Cash Conversion Cycle
- CR = Current Ratio
- LNS = Natural Logarithm of Sales
- SG = Sales Growth
- FL = Financial Leverage
- $\varepsilon$  = The Error Term

## 8. The Descriptive Analyses

This portion of the analyses offers the descriptive statistics for samples of small and large firms included in the study. Divided into two sections, the analyses give details of each variable of study for the two sample firms separately:

### 8.1. Descriptive Analysis for Sample 1

This section presents the descriptive statistics of the pooled data of all firms included in sample 1. Table 1 gives the mean values and the standard deviation for each variable in the study. Aside from that, the table also includes the minimum and maximum values for each variable in order to trace out the extreme values achieved by all variables during the years of study.

***40 Small Non-financial Firms Listed in KSE: (2003-2008) 240 Firm-year Observations***

**Table 1: The Descriptive Statistics for Sample 1**

VARIABLES	Obs	Mean	Min.	Max.	St. Dev.
Return on Assets	240	0.096	-1.232	9.683	0.736
Operating Profit to Sales	238	0.047	-3.760	6.419	0.731
Inventory Conversion Period	240	117.99	0.00	1420.00	154.03
Receivable Collection Period	240	105.94	0.00	2539.67	298.28
Payable Deferral Period	240	461.35	4.89	6675.44	643.25
Cash Conversion Cycle	240	-237.42	-5896.78	2611.02	639.66
Current Ratio	240	2.041	0.024	27.067	3.428
Financial Leverage	240	0.865	0.014	9.118	0.997
Size (Measured by LN Sales)	238	18.372	14.732	19.749	0.957
Sales Growth	240	0.329	-1.000	19.133	1.663

Source: Calculations based on the Balance Sheet Analysis of firms from 2003 to 2008

***8.2. Descriptive Analysis for Sample 2***

This section gives the descriptive details of the pooled data of all firms included in sample 2. Table 2 gives the mean values and the standard deviation for each variable in the study. Aside from that, the table also includes the minimum and maximum values for each variable in order to reveal the extreme values achieved by all variables during the years of study.

**103 Large Non-financial Firms Listed in KSE: (2003-2008) 618 Firm-year Observations**

**9. The Quantitative Analyses**

In the current study, two proxies were used for measuring profitability, i.e., the *return on assets* and the *operating profit to sales*. Hence, two separate regression analyses were made to accommodate the two dependent variables. However, since there were two samples in the study (sample 1 & sample 2), this translated into four regression analyses. These are all discussed one by one in the following sub-sections.

Table 2: The Descriptive Statistics for Sample 2

VARIABLES	Obs	Mean	Min.	Max.	St. Dev.
Return on Assets	618	0.108	-0.295	0.636	0.119
Operating Profit to Sales	618	0.128	-0.308	4.225	0.217
Inventory Conversion Period	618	69.34	0.00	457.69	58.93
Receivable Collection Period	618	29.68	0.00	293.10	30.27
Payable Deferral Period	618	197.96	19.25	2578.8	163.50
Cash Conversion Cycle	618	-98.94	2439.1	116.88	157.89
Current Ratio	618	1.465	0.177	8.432	0.982
Financial Leverage	618	0.591	0.082	1.646	0.194
Size (Measured by LN Sales)	618	22.790	18.394	27.092	1.127
Sales Growth	618	0.242	-0.527	11.187	0.658

Source: Calculations based on the Balance Sheet Analysis of firms from 2003 to 2008

### *9.1. The Regression Analysis 'A' for Sample 1*

In the Regression analysis A for Sample 1, the indicators of working capital management and liquidity of sample 1 are regressed against the 'Return on Assets'. A total of five regressions are made to investigate the determinants of ROA for all 240 firm-year observations. The results of the Regression analysis 'A' for sample 1 are shown in Table 3 and described in the next lines:

The Regression 1 is run to explore the relationship between the Return on Assets and the Inventory Conversion Period for sample 1. The Regression shows an insignificant negative association of -0.046 between the two variables.

In Regression 2, the Inventory Conversion Period is replaced by the Receivable Collection Period. This Regression also shows an insignificant negative relationship of -0.054 between the RCP and the ROA.

The third Regression is run using the Payable Deferral Period as a replacement for the Receivable Collection Period. This Regression also shows an insignificant negative association of -0.126 between the PDP and the ROA.

In the fourth Regression, the Payable Deferral Period is replaced by the Cash Conversion Cycle. This Regression too shows an insignificant positive association of 0.075 between the CCC and the ROA.



In Regression 5, all the indicators of working capital management are excluded in order to separately measure the impact of Current Ratio (liquidity) on the Return on Assets. The Regression shows an insignificant positive association of 0.030 between the CR and the ROA.

**Table 3: Linear Regressions for Sample 1 with ‘Return on Assets’ as a Dependent Variable**

The Regression Analysis A-1: Linear Regressions for Sample 1					
Dependent Variable: Return on Assets					
40 Small-sized Non-Financial Firms listed in KSE (2003 to 2008), 240 Firm-year Observations					
VARIABLES	Reg. 1	Reg. 2	Reg. 3	Reg. 4	Reg. 5
(Constant)	0.030 (0.977)	0.086 (0.937)	0.733 (0.543)	0.102 (0.924)	-0.184 (0.854)
Current Ratio	0.031 (0.660)	0.053 (0.499)	0.014 (0.838)	0.005 (0.946)	0.030 (0.670)
Financial Leverage	0.112 (0.128)	0.111 (0.133)	0.162 (0.045)	0.149 (0.076)	0.116 (0.112)
Size (Measured by LN Sales)	0.000 (0.994)	-0.005 (0.948)	-0.048 (0.561)	-0.006 (0.936)	0.014 (0.844)
Sales Growth	0.003 (0.959)	-0.001 (0.985)	0.000 (0.991)	0.006 (0.927)	0.005 (0.942)
Inventory Conversion Period	-0.046 (0.503)	-	-	-	-
Receivable Collection Period	-	-0.054 (0.504)	-	-	-
Payable Deferral Period	-	-	-0.126 (0.173)	-	-
Cash Conversion Cycle	-	-	-	0.075 (0.425)	-
Adjusted R Square	-0.008	-0.008	-0.002	-0.007	-0.006
F-Statistic	0.627	0.626	0.914	0.665	0.672

## 9.2. The Regression Analysis ‘A’ for Sample 2

In the Regression analysis A for Sample 2, the indicators of working capital management and liquidity are regressed against the ‘Return on Assets’ for sample 2. A total of five regressions are made (from Regression 6 to 10) to investigate the determinants of ROA for all 618 firm-year observations. Results of the Regression analysis ‘A’ for sample 2 are shown in Table 4 and described in the following lines:

The Regression 6 is run to explore the relationship between the Return on Assets and the Inventory Conversion Period for sample 2. The Regression shows an insignificant negative association of -0.051 between the two variables.

**Table 4: Linear Regressions for Sample 2 with ‘Return on Assets’ as a Dependent Variable**

The Regression Analysis A-2: Linear Regressions for Sample 2					
Dependent Variable: Return on Assets					
103 Large-sized Non-Financial Firms listed in KSE (2003 to 2008), 618 Firm-year Observations					
VARIABLES	Reg. 6	Reg. 7	Reg. 8	Reg. 9	Reg. 10
(Constant)	-0.072 (0.457)	-0.063 (0.476)	-0.105 (0.262)	-0.125 (0.173)	-0.117 (0.202)
Current Ratio	0.136 (0.007)	0.128 (0.008)	0.126 (0.012)	0.131 (0.009)	0.127 (0.011)
Financial Leverage	-0.333 (0.000)	-0.308 (0.000)	-0.340 (0.000)	-0.355 (0.000)	-0.347 (0.000)
Size (Measured by LN Sales)	0.118 (0.002)	0.119 (0.001)	0.131 (0.000)	0.139 (0.000)	0.136 (0.000)
Sales Growth	0.014 (0.698)	-0.004 (0.911)	0.015 (0.687)	0.016 (0.648)	0.016 (0.666)
Inventory Conversion Period	-0.051 (0.190)	-	-	-	-
Receivable Collection Period	-	-0.226 (0.000)	-	-	-
Payable Deferral Period	-	-	-0.021 (0.593)	-	-
Cash Conversion Cycle	-	-	-	-0.042 (0.255)	-
Adjusted R Square	0.207	0.254	0.205	0.206	0.206
F-Statistic	33.178	43.044	32.815	33.071	40.994

In Regression 7, the Inventory Conversion Period is replaced by the Receivable Collection Period. This Regression demonstrates a highly significant negative relationship of -0.226 (at  $\alpha = 0.000$ ) between the RCP and the ROA.

The eighth Regression is run using the Payable Deferral Period as a replacement for the Receivable Collection Period. This Regression shows an insignificant negative association of -0.021 between the PDP and the ROA.

In the ninth Regression, the Payable Deferral Period is replaced by the Cash Conversion Cycle. This Regression shows an insignificant negative association of -0.042 between the CCC and the ROA.

In Regression 10, all the indicators of working capital management are excluded in order to separately measure the impact of Current Ratio (liquidity) on the Return on Assets. This Regression shows a significant positive association of 0.127 (at  $\alpha = 0.011$ ) between the CR and the ROA.

### *9.3. Comparison of the Regression Analysis 'A' for Sample 1 and that for Sample 2*

While comparing the results of the Regression analysis 'A' performed separately for Sample 1 and Sample 2, following consequences were drawn:

- No significant associations were detected between the indicators of WCM & liquidity and the Return on Assets for Sample 1 in the Regression analysis 'A'. As for Sample 2, one of the WCM indicators, i.e. the Receivable Collection Period, was found to be negatively related with the Return on Assets with a very high degree of significance.
- None of the regressions run in the analysis displayed a significant association between the Current Ratio and the Return on Assets for Sample 1. Conversely, all the regressions made for Sample 2 evidenced a highly significant, but positive, relationship between the CR and the ROA for large firms.
- A significant positive association was found between the Financial Leverage and the Return on Assets for Sample 1 in only two of the five regressions. Moreover, none of the regressions showed a significant association between the Firm size and the ROA for Sample 1. On the other hand, all the regressions made for Sample 2 depicted highly significant negative associations between ROA and Financial Leverage and highly significant positive relationships between ROA and the Firm size.

The comparison indicates a slightly stronger relationship between the efficient management of working capital and the Return on Assets for Sample 2 in contrast with that for sample 1 which shows no significant relationships at all between the ROA and the variables of WCM.

The comparison also evidences an enormous difference between the effect of liquidity on the Return on Assets of large firms and that of its impact on the ROA of small firms. As could be noticed, all the regressions pointed towards a significant association between the two variables (the CR and the ROA) for large firms in

Sample 2. On the other hand, none of the regressions in the analysis 'A' exhibited the same significant link for firms in Sample 1. Hence, liquidity seems to be a more crucial profit-determining factor for larger firms.

#### *9.4. The Regression Analysis 'B' for Sample 1*

In the Regression analysis B for Sample 1, the indicators of working capital management and liquidity are regressed against the 'Operating Profit to Sales' for sample 1. A total of five regressions are made (from Regression 11 to 15) to investigate the determinants of OPS for all 240 firm-year observations. Results of the Regression analysis 'B' for sample 1 are shown in Table 5 and described in the ensuing lines:

The Regression 11 is run to explore the relationship between the Operating Profit to Sales and the Inventory Conversion Period for sample 1. The Regression shows a significant negative association of -0.114 between the two variables. But the significance level is not fairly high as the  $p$ -value is (0.091). Hence, the result is significant at  $\alpha = 0.1$  level.

In Regression 12, the Inventory Conversion Period is replaced by the Receivable Collection Period. This Regression also shows a significant negative relationship, with a coefficient of -0.170 and at the significance level of (0.032), between the RCP and OPS.

The thirteenth Regression is run using the Payable Deferral Period as a replacement for the Receivable Collection Period. This Regression shows an insignificant negative association of -0.018 between the PDP and the OPS.

In the fourteenth Regression, the Payable Deferral Period is replaced by the Cash Conversion Cycle. This Regression shows an insignificant negative association of -0.142 between the CCC and the OPS.

In Regression 15, all the indicators of working capital management are excluded in order to separately measure the impact of Current Ratio (liquidity) on the Operating Profit to Sales ratio of Sample 1. This Regression shows a highly insignificant negative association of -0.010 between the CR and the OPS.

**Table 5: Linear Regressions for Sample 1 with ‘Operating Profit to Sales’ as a Dependent Variable**

The Regression Analysis B-1: Linear Regressions for Sample 1					
Dependent Variable: Operating Profit to Sales					
40 Small-sized Non-Financial Firms listed in KSE (2003 to 2008), 240 Firm-year Observations					
VARIABLES	Reg. 11	Reg. 12	Reg. 13	Reg. 14	Reg. 15
(Constant)	-1.963 (0.057)	-1.650 (0.117)	-2.360 (0.047)	-3.029 (0.004)	-2.491 (0.012)
Current Ratio	-0.007 (0.916)	0.063 (0.414)	-0.012 (0.864)	0.037 (0.625)	-0.010 (0.887)
Financial Leverage	0.105 (0.146)	0.099 (0.172)	0.122 (0.125)	0.054 (0.509)	0.116 (0.110)
Size (Measured by LN Sales)	0.143 (0.043)	0.118 (0.107)	0.167 (0.042)	0.213 (0.003)	0.176 (0.010)
Sales Growth	-0.019 (0.773)	-0.034 (0.598)	-0.016 (0.807)	-0.017 (0.788)	-0.015 (0.816)
Inventory Conversion Period	-0.114 (0.091)	-	-	-	-
Receivable Collection Period	-	-0.170 (0.032)	-	-	-
Payable Deferral Period	-	-	-0.018 (0.843)	-	-
Cash Conversion Cycle	-	-	-	-0.142 (0.125)	-
Adjusted R Square	0.026	0.033	0.014	0.023	0.018
F-Statistic	2.241	2.605	1.651	2.135	2.063

### 9.5. The Regression Analysis ‘B’ for Sample 2

In the Regression analysis B for Sample 2, the indicators of working capital management and liquidity are regressed against the ‘Operating Profit to Sales’ for Sample 2. A total of five regressions are made (from Regression 16 to 20) to investigate the determinants of OPS for all 618 firm-year observations. The results of the Regression analysis ‘B’ for Sample 2 are shown in Table 6 and described subsequently:

The Regression 16 is run to investigate the relationship between the Operating Profit to Sales and the Inventory Conversion Period for sample 2. The Regression shows a highly significant negative association of -0.098 with a significance level of (0.020).

**Table 6: Linear Regressions for Sample 2 with ‘Operating Profit to Sales’ as a Dependent Variable**

The Regression Analysis B-2: Linear Regressions for Sample 2					
Dependent Variable: Operating Profit to Sales					
103 Large-sized Non-Financial Firms listed in KSE (2003 to 2008), 618 Firm-year Observations					
VARIABLES	Reg. 16	Reg. 17	Reg. 18	Reg. 19	Reg. 20
(Constant)	0.800 (0.000)	0.695 (0.000)	-0.016 (0.910)	0.398 (0.002)	0.647 (0.000)
Current Ratio	0.339 (0.000)	0.323 (0.000)	0.342 (0.000)	0.389 (0.000)	0.322 (0.000)
Financial Leverage	0.167 (0.002)	0.161 (0.003)	-0.064 (0.130)	0.013 (0.729)	0.142 (0.008)
Size (Measured by LN Sales)	-0.197 (0.000)	-0.171 (0.000)	-0.023 (0.438)	-0.114 (0.000)	-0.163 (0.000)
Sales Growth	-0.010 (0.788)	-0.017 (0.658)	0.024 (0.415)	0.007 (0.799)	-0.007 (0.848)
Inventory Conversion Period	-0.098 (0.020)	-	-	-	-
Receivable Collection Period	-	-0.112 (0.004)	-	-	-
Payable Deferral Period	-	-	0.669 (0.000)	-	-
Cash Conversion Cycle	-	-	-	-0.692 (0.000)	-
Adjusted R Square	0.092	0.096	0.469	0.532	0.086
F-Statistic	13.566	14.176	110.144	141.454	15.481

In Regression 17, the Inventory Conversion Period is replaced by the Receivable Collection Period. This Regression also demonstrates a highly significant negative relationship of -0.112 (at  $\alpha = 0.004$ ) between the RCP and the OPS.

The eighteenth Regression is run using the Payable Deferral Period as a replacement for the Receivable Collection Period. The Regression shows a very large coefficient of association between the PDP and the OPS with full significance --- 0.669 at  $\alpha = (0.000)$ .

In the nineteenth Regression, the Payable Deferral Period is replaced by the Cash Conversion Cycle. This Regression also shows a highly significant and a huge negative association of -0.692 (at  $\alpha = 0.000$ ) between the CCC and the OPS for Sample 2.

In Regression 20, all the indicators of working capital management are excluded in order to separately measure the impact of Current Ratio (liquidity) on the Operating Profit to Sales ratio for Sample 2. This Regression too shows a highly significant positive association of 0.322 (at  $\alpha = 0.000$ ) between the CR and the OPS.

#### *9.6. Comparison of the Regression Analysis 'B' for Sample 1 and that for Sample 2*

By comparing the results of the Regression analysis 'B' for Sample 1 and that for Sample 2, following deductions were made:

- There was a significant negative association found between OPS and the Inventory Conversion Period and between OPS and the Receivable Collection Period for firms in Sample 1. The sample, however, could not establish any significant relationship between OPS and the Payable Deferral Period, OPS and the Cash Conversion Cycle and between OPS and the Current Ratio. On the other hand, firms in Sample 2 exhibited very strong and significant associations between OPS and all of the WCM and Liquidity indicators included in the study.
- The coefficient of relationship between Inventory Conversion Period and OPS for Sample 1 (-0.114) was a bit larger than that between the same variables for firms in Sample 2 (-0.098). But the reliability of the relationship between ICP and OPS for larger firms ( $\alpha = 0.020$ ) was stronger than the one that existed between the given variables for smaller firms ( $\alpha = 0.091$ ).
- As for the relationship between OPS and the Receivable Collection Period for the two samples, the coefficient of association for smaller firms (-0.170) was larger than that for larger firms (-0.112). But the reliability of association between RCP and OPS for larger firms ( $\alpha = 0.004$ ) was much stronger than the one that existed between the given variables for smaller firms ( $\alpha = 0.032$ ).
- None of the five regressions in the Regression analysis 'B' for Sample 1 witnessed a significant association between the Current Ratio and the Operating Profit to Sales ratio for small-sized organizations. In contrast, *all* of the five regressions in the Regression analysis 'B' for Sample 2 demonstrated a strong and significant, but positive, link between the liquidity indicator and the OPS.

The above comparison presents quite visible differences between the effects of working capital management and liquidity on the profitability (measured by the Operating Profit to Sales ratio) of small and that of the large organizations.

## 10. Conclusion and Discussion

Studying the results of the Regression Analysis 'A', no significant associations were detected between the indicators of WCM & liquidity and the Return on Assets for Sample 1. As for Sample 2, one of the WCM indicators, i.e. the Receivable Collection Period, was found to be negatively related with the Return on Assets with a very high degree of significance.

The most differentiating results for the two samples were, however, found in the Regression Analysis 'B'. For Sample 1, a weak but significant relationship was found between the Inventory Conversion Period and the Operating Profit to Sales and a highly significant negative association was discovered between the Receivable Collection Period and the OPS. However, the Payable Deferral Period and Cash Conversion Cycle had no significant link with the profitability variable. On the other hand, the pooled data of Sample 2 displayed highly significant relationships of OPS with all the indicators of working capital management including the ICP, RCP, PDP and the CCC. This is a clear indication of the fact that the efficiency of managing working capital has more positive effect on the profitability of larger firms.

Hence, based on the Regression analysis of pooled data for Sample 1 and for Sample 2, the Null hypotheses are all rejected. We here refer as a special case to our Null Hypothesis  $H_{0.3}$  that stated, "*There is no substantial distinction between the effect of Working Capital Management on the Profitability of Small and Large Corporations listed at Karachi Stock Exchange*", and accept the Alternate Hypothesis  $H_{1.3}$ . Looking back at the pooled data analyses for the two distinct samples, the *differentiation* in the effect of WCM on the profit performance of *small* and *large* firms is quite evident. Firstly, the Regression analysis 'A' showed no significant associations being found between the Return on Assets and the variables of WCM for Sample 1; however the analysis did discover one significant association of the 'Receivable Collection Period' with the ROA for Sample 2. And secondly, the results of the Regression analysis 'B' displayed even more visible differences. Practically all the indicators of working capital management were strongly (or 'significantly' in a statistical sense) associated with the profitability variable for Sample 2 compared with only two moderately significant relationships that existed between the WCM and profitability indicators for Sample 1. All these evidences are sufficient enough to hold that *Working Capital Management has a more profound impact on the Profitability of large corporations than on the performance of smaller firms listed in the Karachi Stock Exchange*.



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Journal of  
**Humanities &  
Social Sciences**

JHSS XXIII, No. 3, 2015 (December)

## **Leadership Processes and Employee Attitude in HEIs: A comparative study in the backdrop of Likert's Systems Theory**

**Wajeeha Aurangzeb**

National University of Modern Languages, H- 9, Islamabad, Pakistan

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### **Abstract**

Present study was conducted to make a comparison among leadership processes and employee attitude in public and private sector organizations in the light of Likert's System 1-4 Organizational Theory. This theory indicates that System 1 is led by autocratic leadership processes which manifest negative employee attitude and System 4 is more towards democratic side showing a positive employee attitude. Three universities from each sector in Islamabad region having Social Sciences and Management Sciences departments were randomly selected and 200 faculty members were taken as sample of the study. An Opinionnaire having 36 statements in two subscales was used to collect data. Its psychometric properties were determined and Chronbach's alpha .89 confirmed its reliability. Data analysis revealed that public sector organizations come under the domain of System 3 and private sector in System 2 in leadership processes. Employee attitude and leadership processes were positively correlated in public sector and negatively correlated in private sector. 83% of the variance in leadership processes was due to employee attitude in both the sectors. It was concluded that if organizations want a shift towards System 4 which is the most productive form of an organization, they have to focus upon leadership training as leadership processes directly effects employee attitude which manifests in a positive or a negative manner.

**Keywords:** *Leadership processes, employee attitude, Likert's System 1-4 Organizational Theory*

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## Introduction

Organizations can be defined as social entities which are set up for the purpose of accomplishing collective goals which are predetermined through mutual consensus of organizational members. Organizations are considered as social units having individuals who strive hard for fulfilment of collective goals under the supervision of various organizational structures. These structures ensure coordination among tasks and members who have responsibility and authority to carry out these tasks (Senge, 2006). Goonan & Stoltz, 2004 have stated that organizations have varied nature but constitute following mutual characteristics:

- a) A well-defined hierarchy
- b) Division of labour in a judicious manner
- c) Regulations and rules for designated positions and authority as well as responsibility associated with it.
- d) Social relationships
- e) Standard operating procedures for carrying out different tasks
- f) Recruitment and compensation procedures
- g) Managerial and administrative processes being carried out either in a democratic or an authoritative manner.

Keeping in view above mentioned characteristics, we can say that organizations are social networks having various communication channels working under a leadership. As organizational members are an integral part of organizations, so their attitudes, needs and interests also influence organizational working.

Due to diversity of opinions about a specific definition of organizations, scholars have defined them according to their own perceptions and experiences. Robbins, 1998 suggested that definition of organization is like a “construct”- meaning differently to different people according to their perceptions and experiences in distinct ways. Nowadays scholars try to define this entity through its characteristics such as leadership processes, decision making processes, communication processes, motivation processes, group loyalty, employee attitude, trust and confidence etc. Leadership processes may occur on two extremes of the same continuum. At one end lies democratic processes related to leadership whereas on the other end are authoritative processes. These processes depend upon the styles and philosophy of the organizational leadership.

Saari & Judge, 2004 argue that leadership processes lead towards positive or negative employee attitude. Attitude of an employee is actually the way s/he feels about his/ her higher ups, colleagues and their own job positions in the

organization. This attitude is reflected through employee behaviour. It is also dependent upon the leadership processes being carried out in the respective organization. For example, if leadership processes are democratic in nature; positive employee attitude such as job satisfaction is manifested. But if authoritative leadership processes prevail, then absenteeism and turnover intentions are reflected in the work environment.

Likert, 1979 has studied the leadership processes in depth and then divided them into an array of four systems. He concluded that on one side of the continuum is autocratic leadership and on the other end is democratic leadership. He sub divided this continuum into four systems and concluded that employee attitude is very much dependent upon the leadership processes being manifested in the organization.

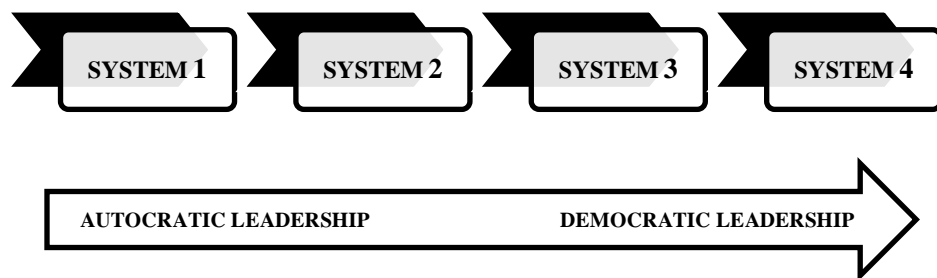


Figure 1: Leadership Continuum (Source: Likert, 1979)

System 1 organization reflects autocratic processes of leadership in which decision making is totally centralized, communication flow is uni-directional and always top down so employee attitude is also negative in nature. System 2 is less authoritative than System 1. System 3 is less democratic in leadership processes as compared to System 4 organization. Employee attitude is positive in system 4 organization and their performance as well as productivity is up to the maximum.

## Literature Review

### Leadership processes

Leadership processes work as a social influence in which subordinates are assisted and supported in accomplishing predetermined goals of organizations. Conger, 1992 argues that a leader has the qualities of establishing direction for his followers, gaining commitment towards task accomplishment and setting

motivation parameters for goal achievement. Stogdill, 1974 states that employees get motivational influence from leadership processes which helps and guides them in the right direction. If the leadership processes are democratic in nature, employees show commitment and trust towards organization but if such processes are autocratically reflected, then employees have a turn over intention. Bass, 1990 argues that leadership processes are present in every organization and they help in motivating towards task accomplishment. Similarly Kouzes & Posner (1995) have the opinion that leadership processes serve as a tool to mobilize organizational members to work and strive for the achievement of shared aspirations.

### **Autocratic leadership processes versus Democratic leadership processes**

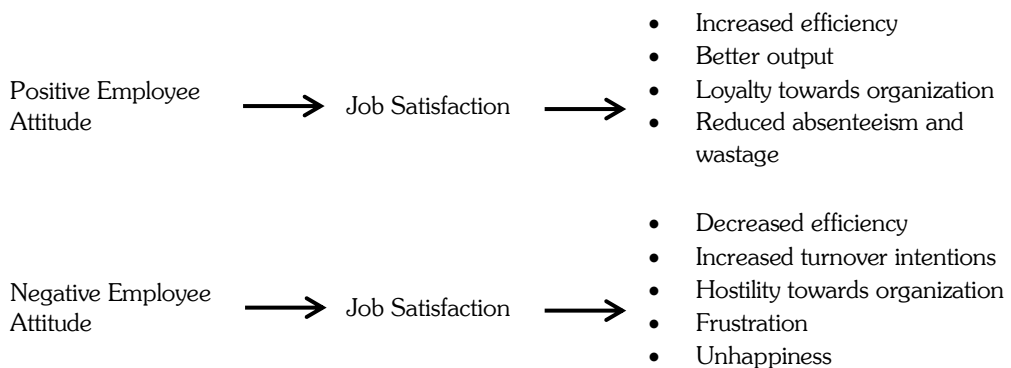
Strict control and no participation in decision making are the major characteristics of autocratic leadership processes. Employees are given very less chance to show their own skills and creativity and they have to follow strict rules and regulations. Close over shoulder supervision, fear, threat, coercion are basic ingredients of such leadership processes. Employees show a negative attitude such as demotivation, job dissatisfaction, absenteeism and turn over intentions in such organizations where autocratic leadership processes are being carried out. Likert's system 1 and system 2 organizations are true examples of such leadership processes (Dunlap & Goldman 1999; Eilickson & Logsdon 2001)

Democratic leadership processes encourage employees to participate fully in decision making processes. Employees are encouraged to take initiatives and their ideas are highly sought if found worthy enough. Enthusiasm, motivation, creativity and initiatives are fostered under democratic leadership processes. Employees feel acknowledged when their creativity is appreciated thus creating a conducive environment for them to work with full zeal (Miao et al 2014). Wood and Wallace, 2004 indicate that Democratic leadership processes result in improved employee motivation and morale, reduction of turnover intentions, increased work performance and lesser grievances at all managerial levels. It can be easily assumed that as the leadership processes changes from autocratic side towards democratic side, so does the employee attitude. Employee attitude is negative and resistant towards autocratic leadership and positive in nature towards democratic leadership processes.

### **Employee Attitude**

Employee attitude is manifested as his / her feelings about the work place, job and whole work environment. Employees reflect their attitude through their behaviour in the work place, their dealings with colleagues and the super ordinates. This

behaviour can be positive or negative depending upon the work environment and magnitude of leadership processes. A rapid change in organizational structures has been observed in this era. Many factors including leadership processes are dominant factors in influencing employee attitude. Researchers have concluded that a positive correlation lies between employee attitude and democratic leadership whereas a negative correlation was found between autocratic leadership and employee attitude. Researchers have argued that job commitment, involvement and job satisfaction are positive employee attitudes whereas turnover intentions, job dissatisfaction and absenteeism are negative employee attitudes (Tepper, 1994; Posdakoff et al, 1996; Hartog & Van, 1997; Hater & Bass, 1998; Trot & Windsor, 1999).



Employee commitment and involvement shows up when organizations have got satisfied and self-directed workers. It is based upon the leadership philosophy and processes of participation at various managerial levels of the organization. Apostolou, 2000 and Khattak et al, 2013 suggest that employee attitude is easily observed through employee engagement and employee disengagement. Employee engagement shows that employees are satisfied with their work environment whereas employee disengagement indicates that lack of motivation exists among employees. Positive employee attitude leads towards increased job satisfaction, creativity and job commitment. All these variables result in improved organizational performance and healthy organizational climate.

Several researchers have concluded that leadership processes tend to have a strong correlation with employee attitude. Leadership processes influence employees' decision about staying with the organization or not. Employee attitude manifests in a positive manner if their leadership processes include trust and confidence over them, shows interest in their well-being, equity and justice prevails and work place

and psychological closeness exists among superordinates and subordinates (Samad, 2006; Shamsuzzoha 2009; Arokiasamy 2013).

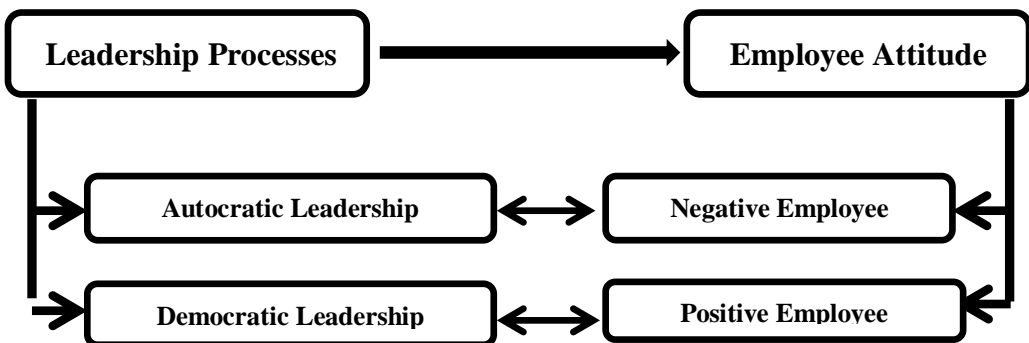
### Statement of the Problem

In order to build responsive, productive and high performing organizations, a deep understanding of the leadership processes prevailing in these is necessary. The employee attitude also acts as a forceful variable to determine the nature of any organization and its efforts towards democratic leadership processes. The present study was aimed at exploring leadership processes, categorizing them as per Likert's Systems theory, investigating employee attitude and making a comparison of these two variables in public and private sector Higher Education Institutes.

### Research Objectives

1. Categorize leadership processes in public and private sector HEIs as per Likert's theory.
2. Investigate employee attitude in both sectors.
3. Correlate employee attitude with leadership processes in both the sectors.
4. Compare leadership processes and employee attitude in both the sectors

### Conceptual Framework



The conceptual frame work of this study indicated that leadership processes can be occurring as autocratic or democratic processes in organizations. If these processes are autocratic, then negative employee attitude is manifested but if they are democratic then positive attitude prevails among employees. So in this research study, leadership processes were taken as independent variable and employee attitude was taken as dependent variable.

## Methodology

It was a comparative descriptive study so quantitative approach was applied. Further details related to population, sampling technique and sample size of the research study are as follows:

### Population , Sampling Technique and Sample size

This study was delimited to Islamabad region only, so population of the study included all the departments of 13 public sector and 04 private sector universities of Islamabad region. List of these universities was taken from the website of Higher Education Commission and a detail about the faculty was retrieved from the offices of respective universities.

As the researcher had less resources and limited time so stratified random sampling technique was applied to select sample of this study. Public sector and private sector were considered as two major strata of the study from which comparison among responses could be retrieved. Three universities having Social Sciences and Management Sciences departments from each sector were randomly selected as the sample. Proportionate stratified sampling was done to obtain same proportion as a sample as it existed in the total population. As exact number of teaching faculty was available, 100 from public sector and 100 from private sector were randomly selected which comprised 10% of the population (Krejcie & Mogan, 1970; Gay et al, 2001; & Cohen, 2005).

### Research Instrument

An Opinionnaire consisting of 40 statements was constructed on 5 point Likert scale and was pilot tested on 40 respondents for its validation. This Opinionnaire had two sub scales namely Leadership Processes and Employee Attitude. Psychometric properties of the research instrument were determined through reliability and its validity. It was given to three experts of the field who validated it thus bringing down the statements to 36 in number as there was an overlapping of 04 statements. Reliability of this instrument was determined through pilot testing. Results of the reliability analysis are as under:



**Table 1:** Alpha reliability coefficients of the Opinionnaire (n=40)

Subscales	Items	Alpha Coefficient
Leadership Processes	18	.89*
Employee Attitude	18	.86*
Overall reliability (Cronbach's Alpha)	36	.89*

\*p<0.05, \*\*p<0.01

Leadership processes sub scale had 18 items and an alpha reliability coefficient of .89 which was significant at .05 level. Whereas the other subscale was named as employee attitude and it had reliability of .86 where p<.05 level. Overall reliability of the Opinionnaire was .89 which was highly significant at .05 levels.

**Table 2:** Split Half Reliability of the Opinionnaire (n= 40)

Cronbach's Alpha	Part 1	Value	.89*
		N of Items	18
	Part 2	Value	.88*
		N of Items	18
	Total	N of Items	36

\*p<0.05 \*\*p<0.01

Split half reliability analysis was done to reconfirm the internal consistency of this instrument. The results were interpreted as first part had .89 reliability whereas second part had .88 reliability at p<.05. This indicated that tool was highly consistent and reliable for data collection.

**Table 3:** Inter Scales Correlation of the Opinionnaire (n= 40)

Subscales	1	2
Leadership Processes	1	-
Employee attitude	.85*	1

\*p<0.05 \*\*p<0.01

Inter scale correlation of the 2 subscales of this Opinionnaire was computed through SPSS in order to determine the construct validity. The above table indicates that both the sub scales have a strong positive correlation of .85 with each other at p<.05.

## Results

Analyses of subscales related to leadership processes and employee attitude revealed following results:

**Table 4:** Leadership process in public and private sector HEI. (n=200)

Sector	N	Mean	<i>t</i>	<i>df</i>	<i>P</i>	<i>Cohen's d</i>
Public	150	22.17	13.89	298	.02*	.88
Private	150	15.25				

\* $p < 0.05$

Summary of the t-test conducted on the responses obtained on leadership subscale from public and private sector organizations clearly indicated that there was a major difference in the responses (Public M= 22.17, Private M= 15.25). *t* value = 13.89 (298) is significant at  $p = .02$  whereas it is lesser than .05 level. The effect size value  $d = .88$  suggested that a high significance was observed. It could be concluded that public sector organizations have more democratic leadership processes as compared to public sector organizations as the mean score for public sector responses was higher as compared to private sector responses.

**Table 5:** Employee attitude in public and private sector HEI (n=200)

Sector	N	Mean	<i>t</i>	<i>df</i>	<i>P</i>	<i>Cohen's d</i>
Public	150	23.32	9.99	298	.03*	.83
Private	150	14.73				

\* $p < 0.05$

An independent samples *t* test conducted to test the difference in responses related to employee attitude in both sectors indicated that a major difference is found in the public sector mean score = 23.32 and private sector mean score = 14.73 whereas *t* value 9.99 (298) is quite significant at  $p = .03 < 0.05$ . According to these readings employee attitude in public sector is inclined towards positive side whereas in private sector due to autocratic processes, employee attitude is manifested in a negative manner. The value of effect size  $d = .83$  is also moderately significant in this *t*-test table.

**Table 6:** Correlation Matrix of Leadership processes with Employee Attitude in public and private sector HEI. (n=200)

	Public		Private	
Subscales	1	2	1	2
Leadership Processes	1		1	
Employee Attitude	.81*	1	-.79*	1

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

Correlation matrix indicates that leadership processes and employee attitude have a positive correlation coefficient with each other in public sector ( $r=.81$ ,  $p<.05$ ) whereas the responses of leadership processes and employee attitude show a negative correlation with each other in private sector ( $r= -.79$ ,  $p<.05$ )

**Table 7:** Simple Linear Regression model showing the effect of Leadership processes on employee attitude ( n= 200)

Independent Variable	Dependent Variable	$\beta$	$t$	$Sig$	$R^2$
Leadership Processes	Employee Attitude	.093	8.65	.000	.83

Dependent variable: Employee Attitude

Independent variable: Leadership Processes

This model indicates  $R^2$  value is .83. It means that independent variable leadership processes explains 83 percent of variance in the dependent variable employee attitude and rest of the variance may be described by some other factors. The beta coefficient of leadership processes is .093 at .000 level of significance which clearly indicates that one unit increase in this predictor variable increases employee attitude by .093 units on the average. As the beta value is positive so it can be concluded that predictor and the dependent variable of this model are directly related to each other.

## Discussion

Organizations serve as social entities which have been set up to accomplish pre-set objectives. Organizational members pursue collective goals under the leadership of their higher ups. Accomplishment of organizational goals require fulfillment of certain managerial processes such as decision making, communication and motivation. If the leaders trust their subordinates and delegate them responsibility as well as authority to accomplish the required organizational tasks, then employees feel motivated and acknowledged to do their job roles to the fullest,

otherwise they dislike their work environment and show lack of motivation. Public and private sector organizations carry out their managerial functions differently as public sector organizations are non-profit and private sector organizations are for-profit social entities. Major objective of this study was to explore and categorize the leadership processes and then to correlate them with the employee attitude prevailing in both the sectors. Data analysis revealed that leadership processes of public sector organization come under the category of System 3 and that of private sector organizations fall in the domain of System 2 as per Likert's Organizational Theory. Results indicate that leadership processes are people oriented in public sector so the employees show full commitment towards organizational constituents whereas employees distrust leadership processes in private sector (Akhter & Butt, 2002). Mester et al, 2003 also suggested that due to participatory leadership in public sector, employees showed more work commitment, less turnover intentions and no absenteeism. It means that leadership processes are towards more democratic end on the leadership continuum in public sector whereas in private sector they are inclined more towards autocratic side. The analysis related to employee attitude also states that employees show a more positive attitude in public sector as compared to private sector; the reason being more democratic environment prevailing in public sector. Colley, 2001 has also supported this view point in his research study stating that leaders of public sector organizations are more motivated to develop organizational culture through employee effectiveness so they put more focus towards participation at all levels of management. Goleman, 2001 and Mentop, 2011 have argued that apart from democratic leadership processes, sometime authoritarian leadership also work best. This scenario is most productive when the employees have less experience and are untrained. So we have to consider the work experience and training of our employees before involving them in participative managerial processes otherwise they may feel threatened and want to quit the job. So before implementation of participative leadership processes, such factors have to be considered also.

## Conclusion

At the heart of organizational environments lie the leadership processes which determine the nature of that organization. These leadership processes correlate positively with employees' attitude and the resultant is employee satisfaction, employee motivation and employee trust or vice versa. In this study, employee attitude and leadership processes regressed positively with each other also meaning that if leadership processes were democratic, employee attitude was positive which reflected that public sector was in the category of System 3 and private sector was in the category of System 2 organization. If organizations want to shift towards System 4, they have to take into consideration following measures:

1. Leadership training to be carried out on frequent basis at all managerial levels so that leadership skills are developed fully.
2. Leaders have to create authentic relations with their employees by improving participation in decision making and delegation of duties.
3. Leaders may empower their subordinates and enable them to accept newer challenges which can keep them motivated.
4. Leadership processes should be such which reflect a positive attitude of trust and confidence towards employees as it is a two way process.
5. Continuous feedback and acknowledgement helps in promoting positive work environment and ultimately it goes a long way in improving overall system of any organization.

### Suggestions for future research

1. Due to time and financial constraint, this study was carried out in Islamabad region only. It can be extended to other geographic regions also.
2. Comparative analysis on demographic variables such as qualification, experience, designation and gender may be explored in public and private sector organizations.

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Journal of  
**Humanities &  
Social Sciences**

JHSS XXIII, No. 3, 2015 (December)

## **Impact of Tanda Dam on Agriculture Land use and Cropping Pattern: (A Case Study of Mouza Kalochanna District Kohat)**

**Anwar Saeed Khan, M. Jamal Nasir, Fazlul Haq**

Institute of Geography and URP, University of Peshawar, Peshawar, Pakistan

### **Abstract**

The present paper deals with the impact of Tanda Dam located in Kohat District on Agriculture land use and cropping pattern in Mouza Kalochanna. The study is based on two sets of data (2005-06 and 2011-12) collected from Revenue Office Kohat district. The data of 2005-06 were selected because the Dam was closed and the water was not available for irrigation in 2005-06, while in 2011-12 it was reopened for irrigation. Data was collected and analyzed to determine the trends and dynamics of agriculture land use and cropping pattern. The findings reveal that most of the cultivated land was current fallow in both cropping seasons in 2005-06, while in 2011-12 the cultivated land increased than the current fallow in both cropping seasons. This shows the impacts of Tanda Dam on agriculture land use and cropping pattern.

**Keywords:** Agriculture; land use; cropping pattern; Tanda Dam

### **Introduction**

Cropping patterns of a region are closely influenced by the geo-climate, socioeconomic, historical and political factors. Pattern of crop land use of a region are manifestation of combined influence of physical and human environment. Differences in attitude towards the rural land in the level of prosperity and technology have produced changes in emphasis. This effects on both landscape and land use is studies are likely to be far reaching (Sujatha et al., 2011).



In this paper, land use change dynamics were investigated by the combined use of satellite remote sensing, geographic information systems (GIS). The result indicated that there has been a notable and uneven urban growth and a tremendous loss in cropland between 1989 and 1997. The land use change process has shown no sign of becoming stable. The study demonstrates that the integration of satellite remote sensing and GIS was effective approach for analyzing the direction, rate, and spatial pattern of land use change. The further integration of these two technologies with Markov modeling was found to be beneficial in describing and analyzing land use change process (Qihao Weng, et al., 2001).

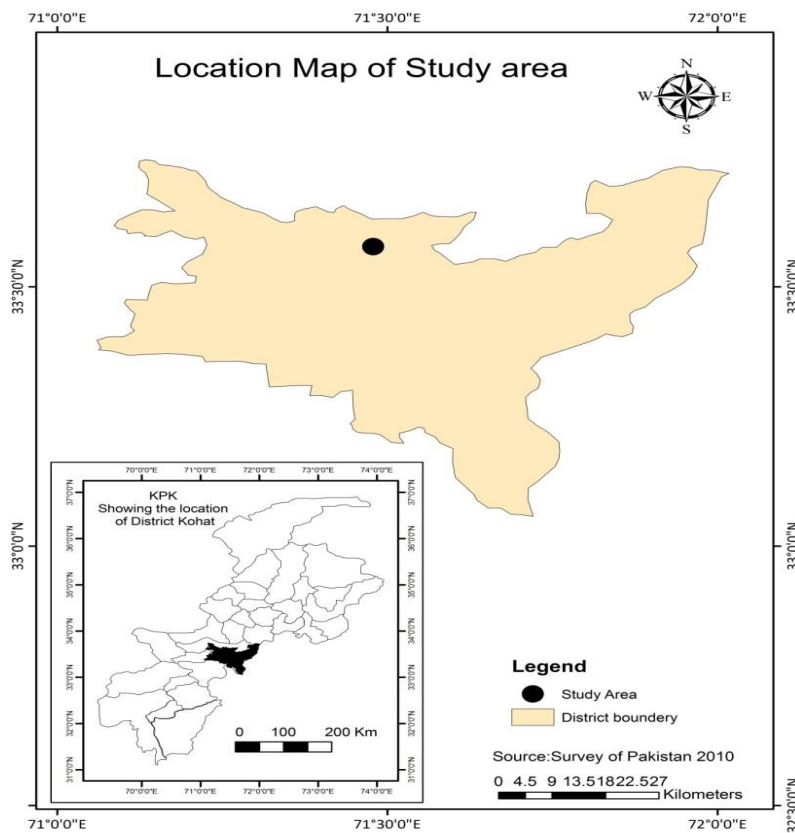
Agriculture land-use means land under net sown area, fallow land and uncultivable agriculture land. In short agriculture land-use means a cropping pattern. Cropping pattern means the proportion of area under various crops at a point of time or yearly sequence and spatial arrangement of crops and fallow on a given area. Cropping pattern is a dynamic concept as it changes over space and time. The cropping pattern of a region is closely influenced by the geo-climatic, socio-cultural, economic, historical and political factors. The agriculture land use is the result of the direct application of effort applied is related to decisions made by farmers regarding to the actual use of land. These decisions are based on his appreciation of the available land resources, his response to these resources as conditioned by the knowledge passed from generation to generation and his appreciation of demand for various agriculture commodities in the market. The cumulative effect of farmer's decisions regarding the choice of crops, the method of tillage and his appreciation of the land resources as reflected in the spatial as well as temporal variations in agriculture land use (Todkari G.U. Suryawanshi S.P.Suryawanshi M.V. and Patil B.D, et al., 2010).

New tools and techniques, of ten based on the synergetic use of disciplinary theory and knowledge, have increased our ability to monitor and explore changes in land use and land cover. Advances in remote sensing and land inventory techniques enable land scientists to make an assessment of current land resources, identify ongoing land cover change processes and identify hot-spots of change (Herold, et al., 2006).

Land use and cover change have been identified one of the prime determinations of global change with major impacts on ecosystems, global biogeochemistry, climate change and human vulnerability (Foley, et al., 2005).up to 1190s land use and land cover change were manly studied from a disciplinary perspective. The need for interdisciplinary approaches to fully understand the interactions within the land system has, more recently, led to the emergence of the new interdisciplinary field of land change science (Rindfuss, et al., 2004; GLP, 2005; Turner, et al., 2007).

## The Study Area

Tanda Dam is located 10 km away in the Southwest of Kohat city. Construction of Tanda dam canal system was started in 1962-1963 and was completed in September 1967 at a cost of 66.3 million. The project was originally investigated and executed by WAPDA and later on transferred to irrigation department in September 1968. The project consist of a diversion barrage on Kohat *toi* to direct the flood water in the feeder canal terminating in to a tunnel servicing as an inlet to the reservoir. The total canal system length is 54.7 miles. Irrigation from the scheme was commenced since *Rabi* 1967-68. The beautiful view of Tanda Dam makes an interesting picnic spot (GoKP, 2012). The Mouza Kalochanna (Study area) is located in the East of Kohat city. The absolute location is  $71^{\circ}27'39''$  to  $71^{\circ}29'31''$  E longitudes and  $33^{\circ}34'13''$  to  $33^{\circ}35'15''$  N latitudes. Its irrigation takes place through Tanda dam canal irrigation system. Various types of food and cash crops are produces in this mouza.



## Materials and Methods

The study was based on irrigation and agriculture (Revenue) data. The data was collected from the following departments.

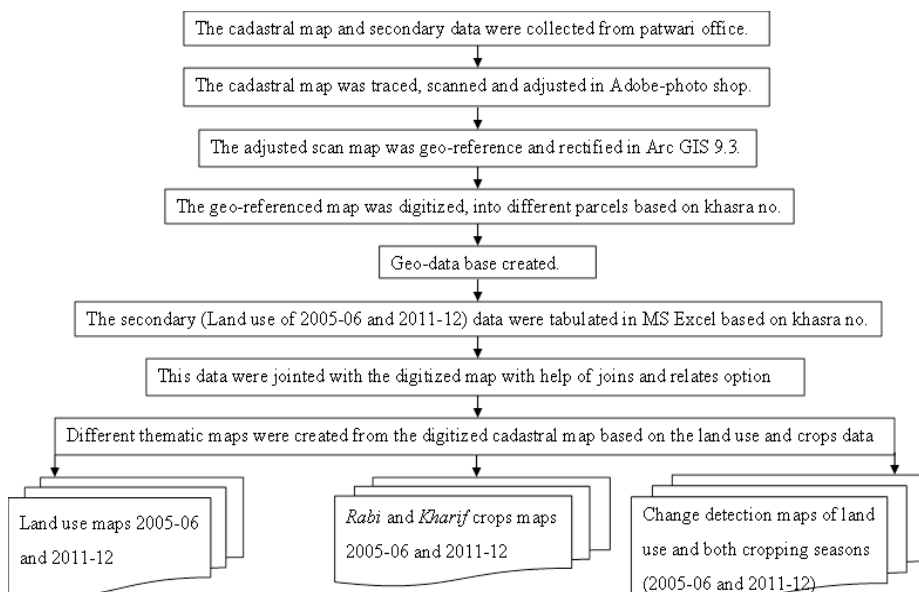
1. Irrigation Department Kohat district (Data about Tanda dam).
2. Revenue Department Kohat district (Agriculture land use and crops data)

These departments provided the noted secondary data sources.

- a) *Shajra Kishtwar* (a large scale cadastral map called *Lattah*).
- b) *Khasra Girdawari* (Ownership, Cultivators and cropping record).
- c) *Lal Kitab* (Land use record).

Cadastral map of Mouza Kalochanna was obtained from *Patwari* Office. It was traced, scanned and after adjusting it in Adobe Photoshop the cadastral map was georeferenced and then the georeference map was digitized in ArcGIS 9.3. Total area and area under different crops was calculated through histogram generation and tabulation. Based on the data various maps were created, which shows the spatial distribution of different crops types. The methodology is explained with the help of flow diagram Figure 1.

**Figure 1: Methodology adopted for the study**



## Water for Agriculture Uses

Agriculture is the major user of fresh water, with a world's average of 71% of the water use. There are large regional variations in the use of water for agriculture, from 88% in Africa to less 50% in Europe (Stockle, 2001). It is estimated that meeting the projected crop demands for 2025 could require an additional 192 cubic miles of water, a volume nearly equivalent to the 10 times annual flow of the Nile (Hussain, 2004; Khan, et al., 2006). No one yet knows how to supply that additional water in way that protects supplies for future use and minimizes environmental impacts. Severe water scarcity presents the single biggest threat to future food production. Even now, many fresh water sources (underground aquifers and rivers) are stressed beyond their limits (Stockle, 2001). As much as 8% of foods crops grow on farms that use ground water faster than the aquifers are replenished, and many large rivers are so heavily diverted that they don't reach the sea for much of the year.

## Results and Discussions

### Agriculture land use

In the Mouza Kalochanna the share of cultivated land in 2005-06 and 2011-12 are 65% and 66% respectively, out of the total land. The remaining 35% are divided into different land use categories, i.e. uncultivated land (culturable waste (Banjarland), non-farm (settlements, etc.) and not available for cultivation). In 2005-06 the net sown land was 163.96 acres 49% of the cultivated land in both cropping seasons (*Rabi* and *khariif*), and it increases to 309.75 acres 92% of the cultivated land. The current fallow land in 2005-06 was 172.28 acres (51%) while in 2011-12 it decreases to 27.51 acres (8%) of the total cultivated land (Table 1).

### Cropping pattern of Mouza Kalochanna

According to the revenue record the overall increase in cultivated land and decrease in uncultivated land is 1.02 acres. Wheat is the main crop of *Rabi* season while in *Kharif* season the orchards are followed by vegetables and maize. The land under wheat in 2005-06 was 108.11 acres which increase to 255.08 acres in 2011-12 the change detected was 146.97 acres. Land under vegetables increased by 0.79 acres in 2011-12. In *khariif* season 2005 and 2011 the change detected in land under maize, vegetables and fodder was 22.81, 20.84 and 13.61 acres respectively, while the land under orchards experience no change in both seasons. Banjarqadeem land decreases from 51.94 acres in 2005-06 to 47.06 acres in 2011-12. Tanda dam was closed in 2005-06 and water was not available for irrigation, thus it reflects the impacts of Tanda dam canal irrigation system on the agriculture land use and

cropping pattern. The 4.34 acres decrease in banjarqadeem was achieved through converting it into culturable waste land, here our concerned is agriculture land use, and it is studied in detail. The net sown land increased in 2011-12 to 309 acres from 163.96 acres in 2005-06 the change detection was 145.79 acres, and the current fallow land decreases from 172.28 acres in 2005-06 to 27.51 acres in 2011-12, and change detected in the current fallow land is 144.8 acres. The increase in net sown land in 2011-12 reflects the availability of water for irrigation. In 2005-06 most of the cultivated land was current fallow and decreased in 2011-12 reveals the impacts of on the agriculture land use.

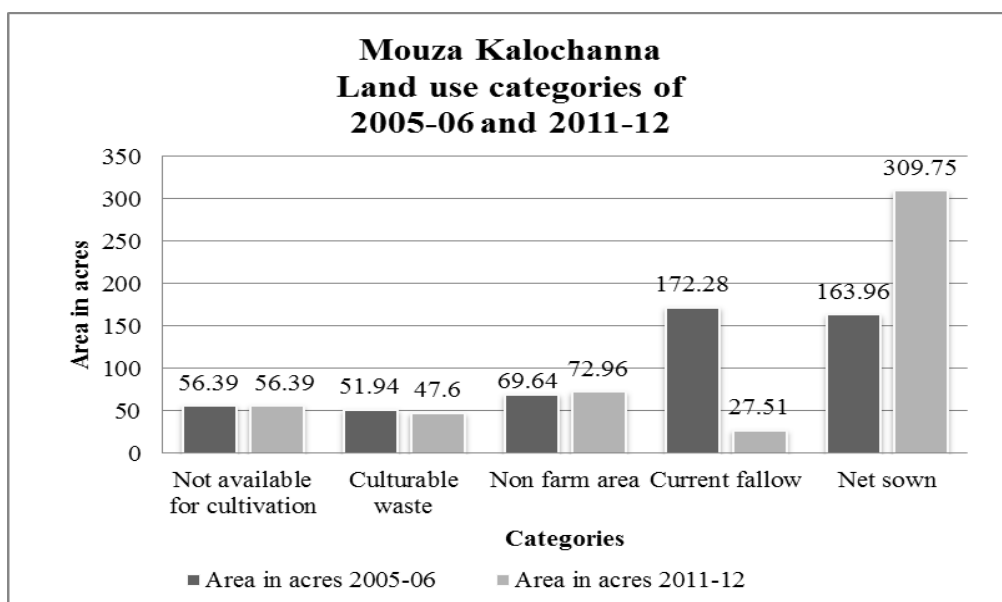
This decrease in the current fallow land and increase in the net sown land actually suggest the impacts of Tanda on the agriculture land use, because the dam was closed and water were not available for irrigation in 2005-06 and most of the cultivated land was vacant in this year, while the water was available from Tanda dam for irrigational purposes and almost whole of the cultivated land was cropped in 2011-12.

**Table-1:** MouzaKalochanna: Land Use Categories with Area in Acres (2005-06 and 2011-12)

Land use categories	Area in acres 2005-06	Area in acres 2011-12
Not available for cultivation	56.39	56.39
Culturable waste	51.94	47.6
Non-farm area	69.64	72.96
Current fallow	172.28	27.51
Net sown	163.96	309.75
Total	514.21	514.21

### Change detection

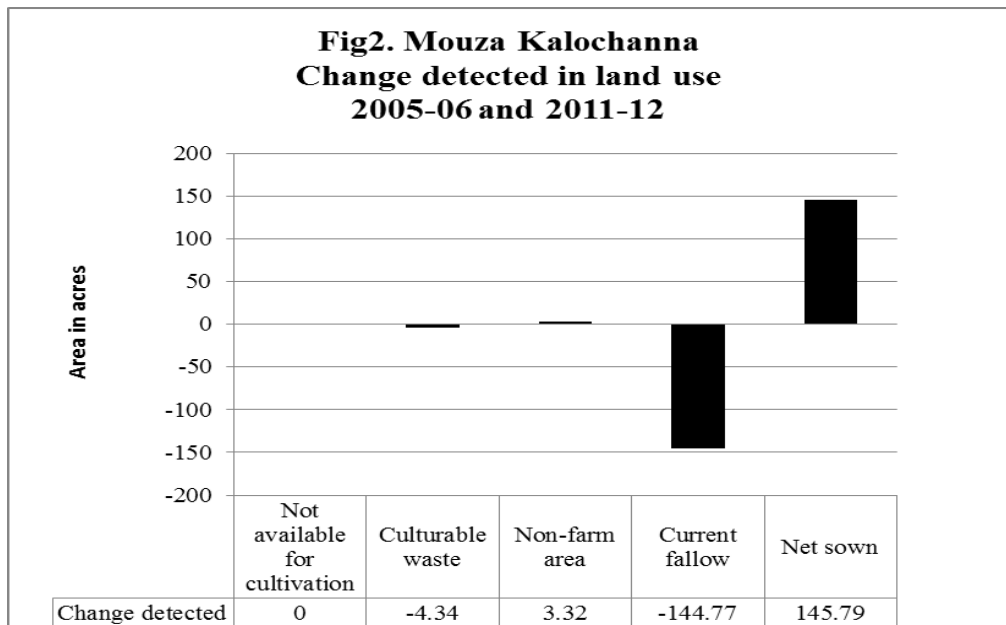
Change detection is theme of the study, because we can conclude the impacts of Tanda dam on the agriculture land and cropping pattern by calculating change. The change detected in the land use categories are enlisted in table 2. The table shows that the area under physical feature (torrent) records no change. The notable change calculated is in current fallow and in net sown area. The current fallow area decrease in 2011-12 by 144.77 acres on the other hand the net sown area increased by 145.79 acres in the same year.



Graph 1: Land use categories in 2005-06 and 2011-1

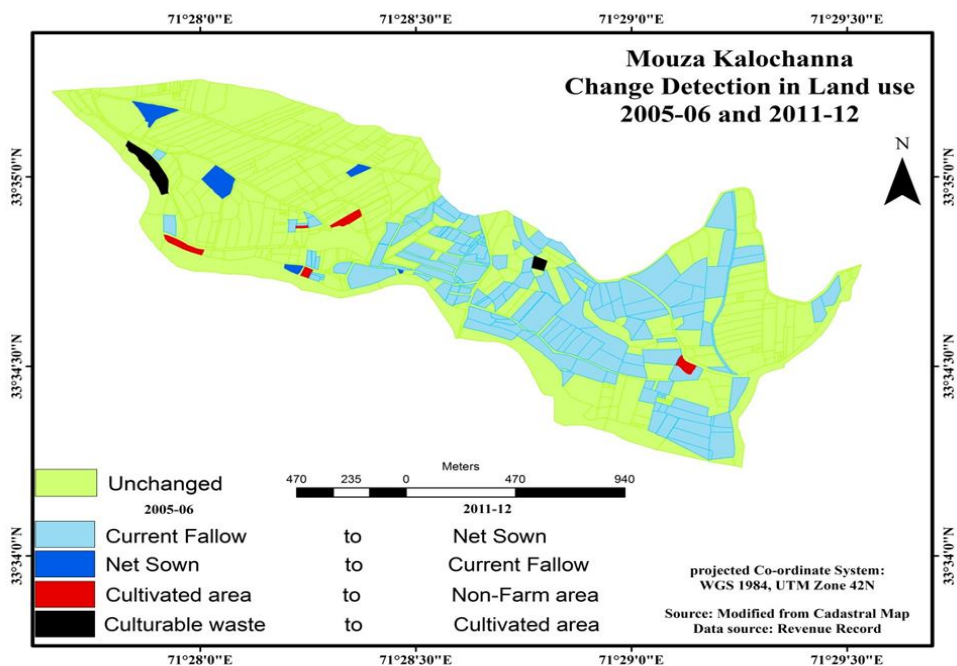
Table-2: Change detection in Land use categories in 2005-06 and 2011-12

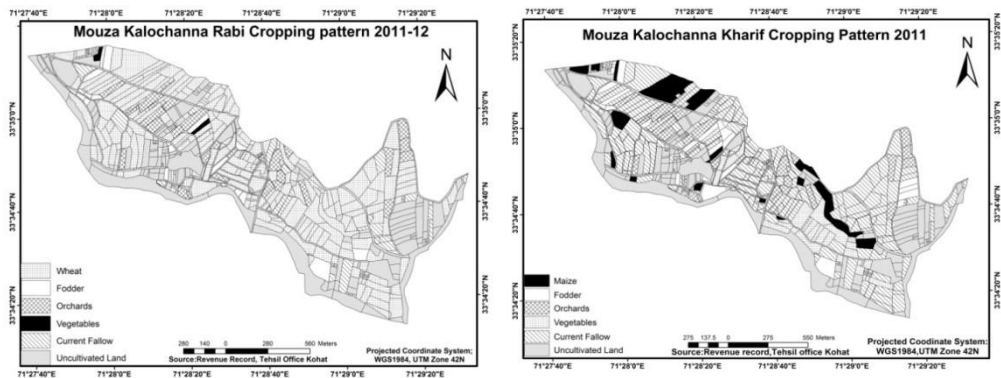
Land use categories	Area in acres 2011-12	Area in acres 2005-06	Change detected
Not available for cultivation	56.39	56.39	0
Culturable waste	47.6	51.94	-4.34
Non-farm area	72.96	69.64	3.32
Current fallow	27.51	172.28	-144.77
Net sown	309.75	163.96	145.79
Total	514.21	514.21	0



Graph 2: Change detection in Land use categories

Map-1: Mouza Kalochanna: Change Detection in Land use 2005-06 &amp; 2011-12





Map-1 shows the change in the land use of Mouza Kalochanna in 2005-06 and 2011-12 in the different categories. The parcels which records change are represented with different colours on this map, while the light green colour represents the unchanged parcels. The black colour on the map shows that some of the culturable waste land (banjarqadeem) is changed into the cultivated land and some of the cultivated land changed into the culturable waste land (settlement) represented by red colour, but these changes are not too much large in term of acreage. The extraordinary decreased was noticed in the vacant land (current fallow) changed into the net sown land represented by the light blue colour on the map.

The changes mentioned above shows the impacts of Tanda dam on the agriculture land of Kohat district. The change was detected in such a way that the area under specific land use categories decreased or increased in 2011-12.

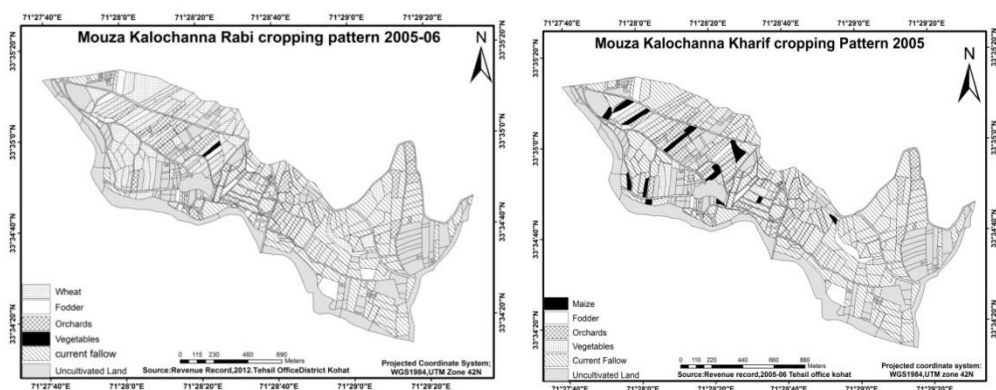
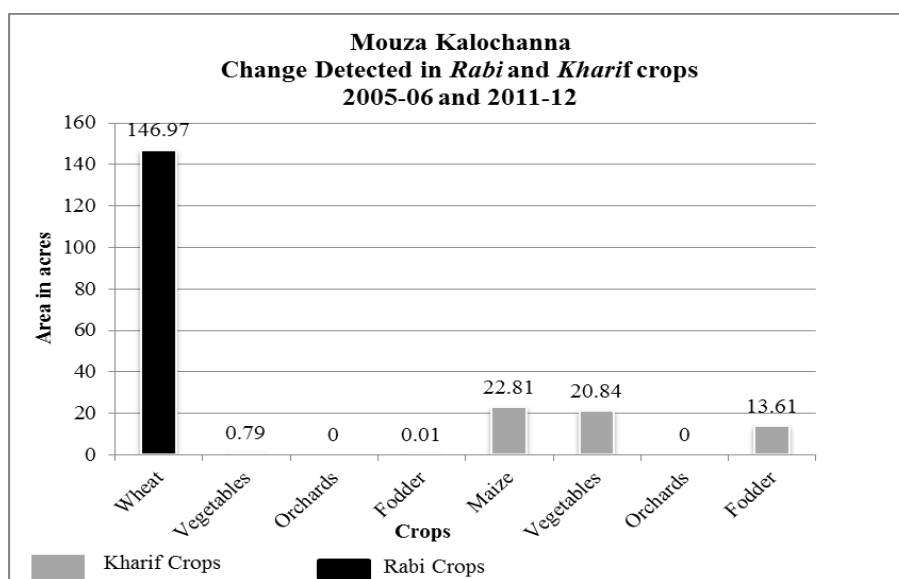




Table 3 shows area under different crops of both cropping seasons (*Rabi* and *Kharif*) in 2005-06 and 2011-12, and also shows the change occur in the crops in 2011-12. In *Rabi* crops the wheat increased more than every crop, as we know that wheat is food crop, its cultivation is practices in every part of our country and it is a water loving crop thus with the availability of irrigation water the area under wheat increased. On the other hand the area under maize increased in *kharif* but less as compare to wheat.

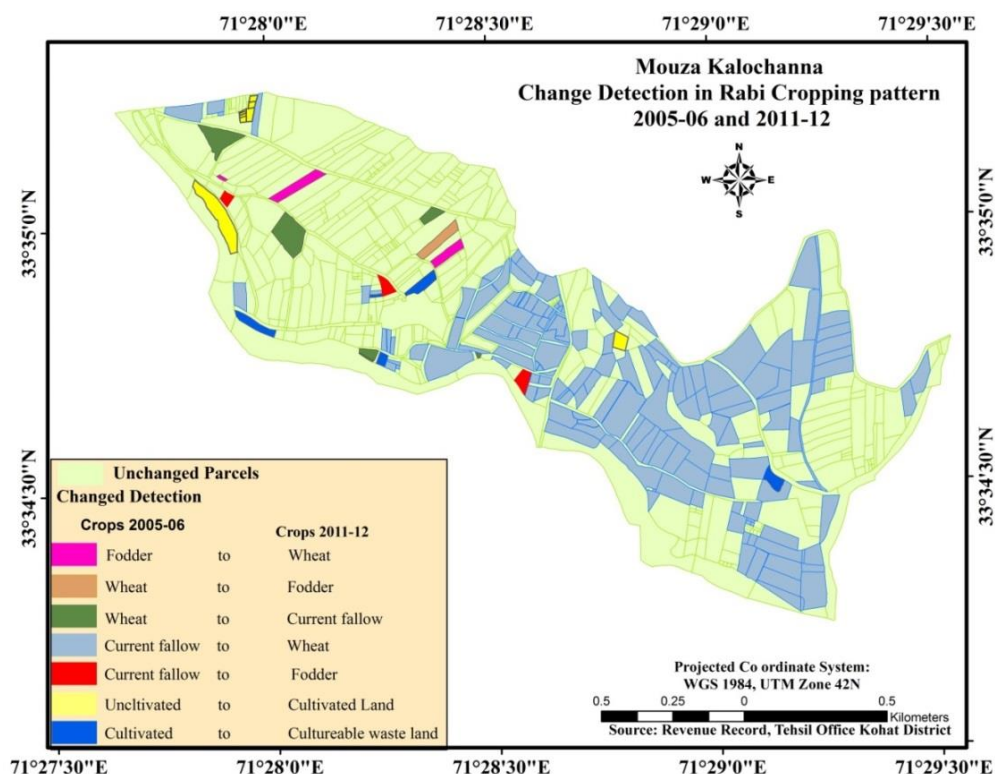
**Table 3:** Land under *Rabi* and *Kharif* crops and Change Detection in land in acres 2005-06 and 2011-12

<i>Rabi</i> Crops and Change				<i>Kharif</i> Crops and change			
<i>Rabi</i> Cops	area in acres 2005-06	area in acres 2011-12	Change detection In acres	<i>Kharif</i> crops	Area in acres 2005-06	Area in acres 2011-12	Change detection in acres
Wheat	108.11	255.08	146.97	Maize	10.72	33.53	22.81
Vegetables	0.89	1.68	0.79	Vegetabl es	13.94	34.78	20.84
Orchards	36.51	36.51	0	Orchards	36.51	36.51	0
Fodder	16.33	16.34	0.01	Fodder	14.5	28.11	13.61
Total area	161.84	309.61	147.77	Total	75.67	132.93	57.26



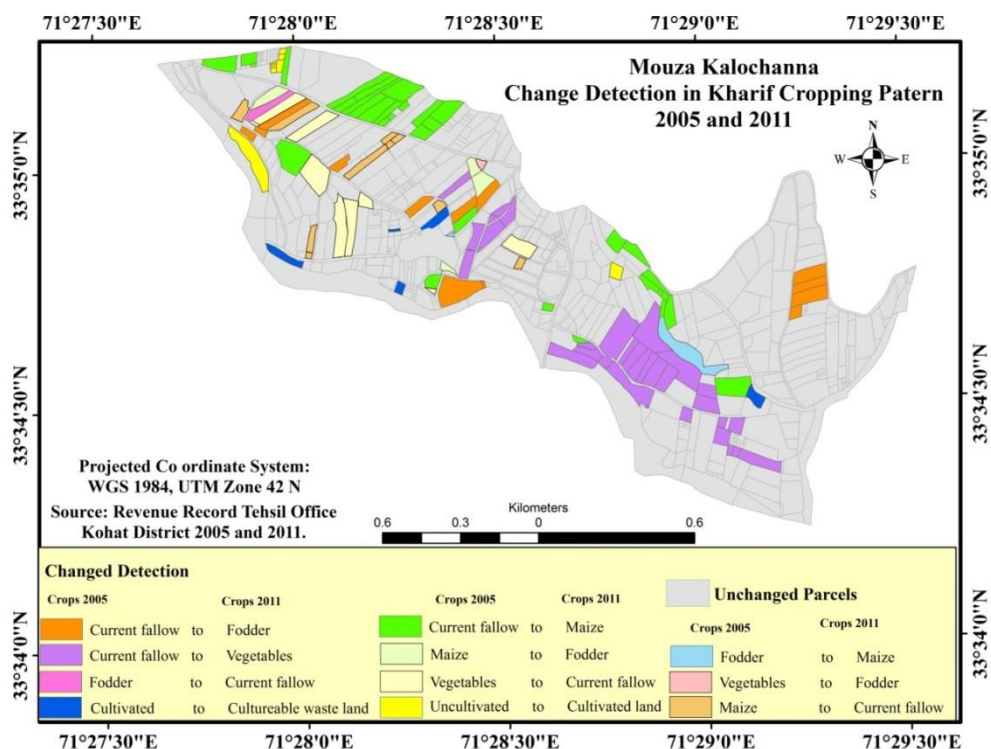
**Graph 3:** Change Detection in *Rabi* and *Kharif* crops 2005-05 and 2011-12

**Map-8:** Mouza Kalochanna: Change Detection in *Rabi* Cropping Pattern 2005-06 and 2011-12



The above map (5. 10) reveals the change in the *Rabi* cropping pattern of the mouza between year 2005-06 and 2011-12. The different colour on this map tells that these parcels records change in 2011-12. It is clear from the map that on most of the current fallow land wheat is cropped in 2011-12. In *Rabi* 2005-06 most of the land was current fallow due to the unavailability of irrigational water from Tanda dam, and 2011-12 the water from Tanda dam for irrigation was available which change the current fallow land into net sown land. This map helps in understanding the change in *Rabi* cropping pattern, the pink colour on the map shows that this piece of the cultivated land in *Rabi* 2005-06 was under fodder, which changed in 2011-12 into land under wheat. Some of the parcels also converted from uncultivated to cultivated land represented by the yellow colour on the map.

Map-9: Mouza Kalochanna: Change Detection in *Kharif* Cropping pattern 2005 and 2011



Map-9 shows the change detection in *Kharif* cropping pattern in 2005 and 2011. The light dark colour is used in the map to show the unchanged parcels, while the variety of colours is used to show the change detection in other crops and land use categories. The green colour representing the vacant land in 2005 converted into land under maize, while the purple colour show the vacant land converted into land under vegetables. These changes suggest that most of the land was vacant in *Kharif* 2005 which changed to net sown in *Kharif* 2011. The prominent reason was that Tanda dam was not in operation and the water from Tanda dam was not available for irrigation in 2005 *Kharif* season, therefore in *Kharif* 2005 most of the land was vacant, while in 2011 Tanda dam was in operation and the vacant land changed to net sown land. Besides from these changes with the availability of water intercropping pattern change was also detected in 2011 *Kharif* season. These may be due to the fact that some crops are more water loving then the others.

## Major Issues

The water deficiency in the dam is one of the major issues. During the construction of the dam an agreement was signed in 1962 between local people and the government. According to this agreement less than 45 cusecs water will not allowed into the dam. Due to this agreement flood water will be allowed in the dam, the Kohat *to* is flooded only in the days of monsoon rainy season and this flood water also brings a lot of sediments which deposits in the dam and decreasing the storage capacity of the dam. The cleaning and repairing of the canal system is also a problem, which causes blockage and seepage of water. The main canal is running through the city, the solid waste block the water flow and the toxic liquid flowing from factories to the canal causes pollution of the water, which is harmful for the crops. The estimated life of the dam is fifty years which is going to be complete its life in 2017.

## Conclusion

It is concluded from the above discussion that Tanda Dam is playing a leading role in the agriculture of Kohat District. Because most of the agriculture land was vacant in both *Rabi* and *Kharif* cropping seasons in 2005-06 due to the unavailability of water for irrigation from Tanda Dam, The Tanda dam was closed down in 2005-06 for reconstruction purposes and the water was not available for irrigation. In 2011-12 the net sown area increased two fold in both the seasons. A tremendous increase is noticed in each type of crop in 2011-12 in both cropping seasons (*Rabi* and *Kharif*).

So it is concluded that Tanda Dam has huge Impacts on the agriculture land use of Kohat district, because Kohat is having semi-arid conditions, rainfall is not evenly distributed and its agriculture is dependent on irrigation.

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Journal of  
**Humanities &  
Social Sciences**

JHSS XXIII, No. 3, 2015 (December)

## Assessing the Impact of Educational Status on Poverty Alleviation in Khyber Pakhtunkhwa, Pakistan

Muhammad Aurangzeb Khan, S. Zari Rafiq

Department of Social Work, University of Peshawar, Pakistan

### Abstract

The core purpose of this study was to assess the impact of educational status on poverty alleviation in Khyber Pakhtunkhwa. The major hypothesis developed for this study was that higher literacy rate among people had greater potentials to combat poverty. The nature of the respondents was male both literate and illiterate falling in the age group of (18-60) years and above from the slum areas of four randomly selected districts of Khyber Pakhtunkhwa namely Mardan, Kohat, Haripur and Chitral respectively. A sample size of 800 respondents was drawn out from the target population. Interview schedule, designed on Likert Scale was used as tool and interview as method for data collection. Chi-square test was used to measure the association between two variables i.e. dependent variable (Poverty Alleviation) and independent variable (Educational Status). A relationship was measured among occupation ( $P = 0.000$ ), monthly income ( $P = 0.000$ ), per capita income of the educated respondents ( $P = 0.000$ ), per capita income of the illiterate respondents ( $P = 0.000$ ), house condition ( $P = 0.000$ ), possession of property ( $P = 0.000$ ), type of property ( $P = 0.000$ ), size of land ( $P = 0.000$ ), affordability of medicines ( $P = 0.000$ ), specialist doctor and hospitalization ( $P = 0.000$ ) with educational status. Free education, investment in education and improvement of existing formal education system were forwarded as recommendations in light of the study.

**Keywords:** Educational status, Poverty Alleviation, Association Measurement

## Introduction

Formal education system has an important role in the building of economy and overall social development strategy of any country. The global impact of formal education on postindustrial society has been so extensive that it can be argued that mass education leads social revolution and expedite the process of modernization (Parsons, 1971). Education serves as a tool for the individual's psycho-social and socio-economic development and educated individuals can lead their nations to the beacon of development (Kant, 1971). Education and schooling are instrumental in creating social reforms on the global level (Dewey, 2009).

However, the people of third world countries have no access to education and still they follow their traditional thinking to reforms socio-economic institutions. The low level of education in third world countries has significant influence on the life style of the local inhabitants and they are unable to develop their socio-economic condition. Similarly, the condition of education sector in Pakistan is very miserable. As a result of low education ratio poverty has been increasing in Pakistan. More than 40% people in Pakistan are leaving under the poverty line. Resultantly, they are unable to afford quality education for their children. In addition, the government's negligence is frustrating the situation further. The primary education completion rate in Pakistan given by UNESCO (2012) is 33.8 % for females and 47% for males, which shows that people in the 6th populous country of the world are unable to get the basic education (Mehbub-ul-Haq Human Development Center Report, 2012).

The education ration can be increased by providing free education to the people and it can also be reduced the poverty level. Particularly, investment in formal education is considered a key to an increase the overall income of the population and hence to reduce the poverty (Arif and Iqbal, 2009). Education offers many benefits for both individual and societies. The Center for Research in Chronic Poverty (2008) highlights the importance of level of education that, "formal education is strongly associated with the decreased possibility of chronic poverty.

The idea behind the selection of my research topic was to highlight the problem of poverty, which is a growing social problem, with reference to its alleviation through reliable & sustainable means of. Education as we know is a well-known developmental approach applied globally, but ironically, not in Pakistan and Khyber Pakhtunkhwa. The Education sector shows a devastating state of affairs in terms of access, quality and quantity. We have committed on the forum of EFA in 1990 and then in 2000 to enhance the literacy ratio to 100% completion rate of primary education and 86% in secondary education in this year of 2015, but failed to do so.

Keeping into account the above facts for different attempts on part of the scholars, the present study was designed to know into the relationship between educational status and poverty alleviation in KP, Pakistan. This study is focused on the education importance and its role in the alleviation of poverty and also on the leaving standard of the people.

### **Literature Review**

Education has got importance especially in term of development on the global level. Various research studies indicate that low level of education increased poverty, slavery, crimes, underdevelopment, communal riots, societal disharmony, lack of coordination, disintegration, economic setback in a human society (John, 1975; Kant, 1971; Dewey, 2009). Poverty can be reduced by effective education. Education is considered one of important capital and play pivotal role in development. The knowledge based economy is the product of education process to generate human capital. The promotion of human capital is essential for the utilization of changed economy in the age of globalization (Ozga, Seddon, Popkewitz, 2006). People have much higher levels of formal education than ever before around the world at the age of globalization. In 1990, a widespread progress was reported in education sector by the first Human Development Report HDR, as average years of schooling have raised by two years and gross enrolment ratios by 12 percentage points and literacy rates have raised from 73 percent to 84 percent (United Nation Development Programme, 2010).

The importance of formal education takes central point in discussion of social and economic development of the people with reasons by Stern (2001), that First, the quantity and quality of education influences strongly the overall governance, skilled workforce and other developmental institution of the country. Second, universal access to basic education is essential for ensuring that all segments of society will benefit from socio-economic development (Stern, 2001).

However, this study will fill the gap in the existing literature. Various studies discussed the importance of education on the global and national level, while this study will specifically focused on the Khyber Pakhtunkhwa. It is focused on to see the impact of education specifically on Khyber Pakhtunkhwa. The existing gap in the available literature rationalized the importance of this study.



## Methodology of the Study

The main purpose of this study was to know and explore the role of formal education in poverty alleviation in Khyber Pakhtunkhwa, This is a comparative study of literate and illiterate research respondents from the slum areas of the targeted 4 districts (50% coverage the area by lottery method) i.e Kohat, Haripur, Mardan and Chitral districts with 15-20% sample size through purposive and snow-ball techniques. Keeping in view Pakhtun lives in a patriarchal structure. Normally, the household earning members of families are males, so males have an influential role in the poverty alleviation. For this purpose 50% literate and 50% illiterate male (respondents) within the age group of (18 -60) years and above to compare their socio economic status on the basis of education.

From the total population of slum areas of four districts in Khyber Pakhtunkhwa, a sample size of 800 was taken according to the criteria of Sekaran and Bougie (2003) where a sample size not less than 500 is considered appropriate for most of the studies having large population size. This is also in line with Warwick & Linger (1975) formula;

$$f = n / N \quad f = \text{required sample size in the data}$$

$$f = 4/24 = 1/6 \quad n = \text{total sample size}$$

$$N = \text{total population size}$$

$$\text{Percentage} = 1/6 \times 100 = 16.7 \% \quad (\text{ideal sample is 15-20\%})$$

Furthermore, the interview schedule (designed in Likert scale) was used as a tool for collecting primary data from the field. To test the association between dependent variable and independent variable at bi-variate level (x<sup>2</sup>) test statistics was used (Taj-1978)

$$X_{\text{obs}}^2 = \sum_{j=1}^r \sum_{k=1}^c (O_{jk} - Y_{jk})^2 / Y_{jk}$$

However, in some cases, the basic assumption of chi-square (x<sup>2</sup>) i.e. a cell must contain frequency not less than 5 was violated. To overcome this problem, Fisher Exact Test was also applied (Baily-1982). As shown below.

$$\text{Fisher Exact Test Probability} = \frac{(a+b)!(c+d)!(a+c)!(b+d)!}{N!a!b!c!d!} \quad (\text{II})$$

**Table-1:** Conceptual framework

Independent variable	Dependent Variable
Educational status	Poverty Alleviation

## Results and Discussion

This section indicates the relationship between the educational status and poverty alleviation in the light of different indicators. It is analysed in the light of the primary data to see the impact of education on the living standards of the respondents as shown in Table- 2.

**Indicator-1** presents the research respondents occupations i.e. government servant, semi government servant, private servant, farmer/ daily wager, businessmen, landlord, or jobless and retired. It also shows the comparative status occupation wise of the literate and illiterate respondents. The table-2 analysis shows that there is a clear difference with comparison to significance ( $P < 0.05$ ) in the occupation of the literate and illiterate respondents. The literate respondents were significant majority having government jobs while majority of the illiterate respondents were dependent doing farming and earning on daily basis.

**Indicator-2** presents the comparative status of monthly income from all sources of the literate and illiterate research respondents with chi square value of significance. The analysis with ( $P < 0.05$ ) shows that literate respondents were in significant majority in high income groups than that of illiterate respondents which strengthen their status to combat poverty.

**Indicator-3** presents the research respondents, living standard regarding house condition (made of concrete or mud). The analysis with ( $P < 0.05$ ) shows that there is a clear difference in the living condition of the literate and illiterate respondents. Majority of the literate respondents were living in *Pucca* (concrete) houses while majority of the illiterate respondents were living in *Kacha* (Muddy) houses.

**Indicator-4** presents the status of owning of house of research respondents comprised on factors of own house, rented and provide by master with no rent, with chi square value of significance.

The analysis shows that in factors of owning of house, majority of the literate respondents had their own houses with ( $P < 0.05$ ) while majority of the illiterate research respondents were in rented houses provided by their masters with no rent.

Table -2: Association between Educational Status and Poverty Alleviation

S. No	Indicators	Factors	Education Status		Chi-Sq Value	P. Value
			Literate	Illiterate		
1	Occupation	Government Servant	121(30.3%)	0(-)	435.172	.000
		Semi Government	66(16.5%)	18(4.5%)		
		Private	94(23.5%)	123(30.9%)		
		Farmer/Tenant/Daily Wager	18(4.5%)	225(56.5%)		
		Retired	4(1.0%)	0(-)		
		Land Lord	2(5%)	0(-)		
		Jobless	86(21.5%)	0(-)		
		Business	9(2.3%)	34(8.5%)		
		Total	400(50%)	400(50%)		
Grand total		800(100%)				
2	Monthly Income	5000, 10000	132(33.0%)	278(69.6%)	217.721	.000
		10001, 15000	25(6.3%)	56(14.0%)		
		15001, 20000	50(12.5%)	51(12.8%)		
		20001, 25000	58(14.5%)	9(2.3%)		
		25001 and above	135(33.8%)	6(1.5%)		
		Total	400(50%)	400(50%)		
		Grand Total	800(100%)			
3	House condition	Kacha ( made of mud)	127(31.8%)	301(75.3%)	152.125	.000
		Pucca ( made of concrete)	273(68.3%)	99(24.8%)		
		Total	400(50%)	400(50%)		
		Grand total	800(100%)			
4	Owning of the House	Own House	347(43.4%)	141(17.6%)	242.134	.000
		Rented	46(5.8%)	111(13.9%)		
		Provide by master with no rent	7(.9%)	148(18.5%)		
		Total	400(50%)	400(50%)		
		Grand Total	800(100%)			
5	Possession of Property	Yes	326(81.5%)	130(32.5%)	195.920	.000
		No	74(18.5%)	270(67.5%)		
		Total	400(50%)	400(50%)		
		Grand Total	800(100%)			
6	Type of Property	House	250(72.0%)	70(49.6%)	22.286	.000
		Land	-	-		
		Vehicle	97(28.0%)	71(50.4%)		
		Total	347(50%)	141(50%)		
		Grand Total	800(100%)			

Table 2 (Continued)							
7	Diet		Full Time	373(93.3%)	122(30.6%)	333.835	.000
			Skipped	27(6.8%)	278(69.5%)		
			Total	400(50%)	400(50%)		
			Grand Total	800(100%)			
8	Affordability of medicines, specialist doctor and Hospitalization	Medicines	Yes	318(79.5%)	102(25.5%)	233.865	.000
			No	82(20.5%)	298(74.5%)		
			Total	400(50%)	400(50%)		
			Grand total	800(100%)			
		Specialist Doctors	Yes	268(67.0%)	122(30.0%)	106.647	.000
			No	132(33.0%)	278(69.5%)		
			Total	400(50%)	400(50%)		
			Grand total	800(100%)			
		Hospitalization	Can Afford	268(67.0%)	124(31.0%)	103.721	.000
			Cannot Afford	132(33.0%)	276(69.0%)		
			Total	400(50%)	400(50%)		
			Grand total	800(100%)			

**Indicator-5** presents the research respondents status on possession of property and the comparison of literate and illiterate respondents with chi square value of significance. The analysis revealed that the majority of literate respondents were having significant position with ( $P < 0.05$ ) regarding possession of property than those of illiterate respondents.

**Indicator-6** presents the status of research respondents on type of property comprising of factors of house, land and vehicle with chi square value of significance. The analysis revealed that the literate respondents were in significant majority in ownership of houses and vehicles in comparison with illiterate respondents with ( $P < 0.05$ ) in ownership of type of property.

**Indicator-7** presents the research respondents availability of diet comprising on factors of full time and skipped. The analysis shows that the literate respondents were in significant majority in availability of diet with ( $P < 0.05$ ) with educational status than that of illiterate respondents.

**Indicator-8** presents the affordability of medicine, the affordability of specialist doctors and the affordability of hospitalization, where the analysis shows that literate respondents were in significant majority than the illiterate respondents with ( $P < 0.05$ ) with educational status.

### **Conclusion and Recommendations**

The problem of poverty continues to be a pervasive one and it remains an instrumental obstacle to balance growth and development of the country. This study gives a clear picture of the association between education and poverty alleviation in Khyber Pakhtunkhwa, Pakistan. It is an acknowledged fact that education plays a vital role in the poverty alleviation. This study revealed facts about the relationship between educational status and poverty alleviation. It was found that significant majority of literate respondents having government jobs. They have a high income and most of them are living in *Pucca* (concrete) houses. The educated people have all facilities such as houses, possession of property, vehicles and availability of diet. However, it is found in the field that poor people in Khyber Pakhtunkhwa are uneducated and they have no access to all those facilities which available to the educated masses. It is concluded that poverty can be reduced to increase investment in education sector. Further, education can improve the condition of the low income people.

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JHSS XXIII, No. 3, 2015 (December)

## Socio-Economic Profile of Drug Abusers Attending a Treatment Center in Peshawar, Pakistan

M.Jamal Nasir, Anwar Saeed Khan, Fazlul Haq

Department of Geography, University of Peshawar, Pakistan

### Abstract

Addiction is an inveterate, often reverting brain disease which causes compulsive drug use, in addition to harmful effects to the individual as well to those around the addicted one. Geographic location of Pakistan's adjacent to Afghanistan, which is largest producer of opium in the world making the country vulnerable to drug trafficking as well as drug abuse. In this study, an attempt is made to investigate the socio-economic conditions of drug abusers in Peshawar. A total of 61 respondents were studied for the study. The study revealed that cannabis (Chars) and heroin is the most preferred drug which was used by 39 percent of respondents. The analysis revealed that drug abuse was common in both educated and uneducated respondents. It is important to note that eighty percent of the respondents were not aware of the negative consequences of the drug before its initial use.

**Keywords:** Socio-economic profile; drug-abuse; treatment centres

### Introduction

Drug is any substance (other than food) which by its chemical nature affects the structure or functioning of living organism (Danial et al. 1980; Kosten et al. 1987). According to World Health Organization drug abuse is the consumption of a drug apart from medical need or in the unnecessary quantities. Drug addiction is the compulsive use of a drug in greater amount than is used in ordinary therapeutic and is harmful to individual or society or to both (Jaffe 1975; Bozarth 1987; Smith



&Wesson 1983; Ausubel 1958). Addiction is an inveterate, often reverting disease which causes compulsive drug use, in spite of harmful effects to the individual as well to those around the addicted one. Although, in the initial stage, most of the people voluntarily decide to take drugs, but with the passage of time the brain changes challenge the addict's ability to resist against the impulses which urge them to take drug (NIDA 2011).

Since long, Pakistan has suffered from the consequences of illegitimate opium cultivation, trafficking and abuse. Geographically Pakistan is located adjacent to Afghanistan which is the world's largest producer of illegitimate opium. This makes Pakistan more vulnerable to drug trafficking as well as abuse (UNODC 2008). Before partition opium was cropped and marketed legally until the enforcement of *Hadood* Ordinance in 1979, when a ban was imposed on the cultivation, production, marketing and use within Pakistan (Chanda & Mujahida 2007). In 1982, the Pakistan Narcotics Control Board (PNCB) conducted the first National Survey of Drug Abuse. The results of the survey bring out substantial expanding trend of heroin use and it was expected that heroin intake may continue to rise. The subsequent surveys in 1986 suggested a rapid growing pattern of drug abuse in the country (GoP, 1986). The 1993 National Survey on Drug Abuse estimated the number of drug users at 3.01 million of which approximately 50% were addicted to heroin.

The Russian intrusion of Afghanistan in 1979, followed by migration of Afghan refugees into Pakistan is believed to be the important reason for increase in the illicit drug trafficking. Pakistan became a major exporter of heroin until 1980's (Khan et al. 2004). Drug abuse trend in Pakistan can be judged from the figures that about 5 percent of the total population is suffering from the use of narcotics (Nayyar 1984). A Survey conducted in Lahore find out that there are approximately 40,000 opium addicts in Lahore and that the main consumers are factory workers and those who work for long hours i.e. Rickshaw and taxi drivers etc. Hashish smoking is common practice among urban population and is rapidly spreading not only into poor socio-economic group but also among university students (Mubasher 1975). In Pakistan awareness of the drug abuse problem has developed quite recently (Ghulam, 2003). The major cause of drug addiction are peer pressure, anxiety and tension (Habib 1984; Hussain 1984; UNDCP 2000). According to the National Assessment Report on problem of drug use in Pakistan 2006, prepared by the Government of Pakistan and the United Nation Office on Drugs and Crime (UNODC) Cannabis (marijuana) is the most commonly used drug because of easy availability and its low price. This report estimates 628,000 opiate users in Pakistan out of which 482000 (77%) are chronic heroin abusers. Heroin was largely unknown till 1970's but became a major problem during 1980s.

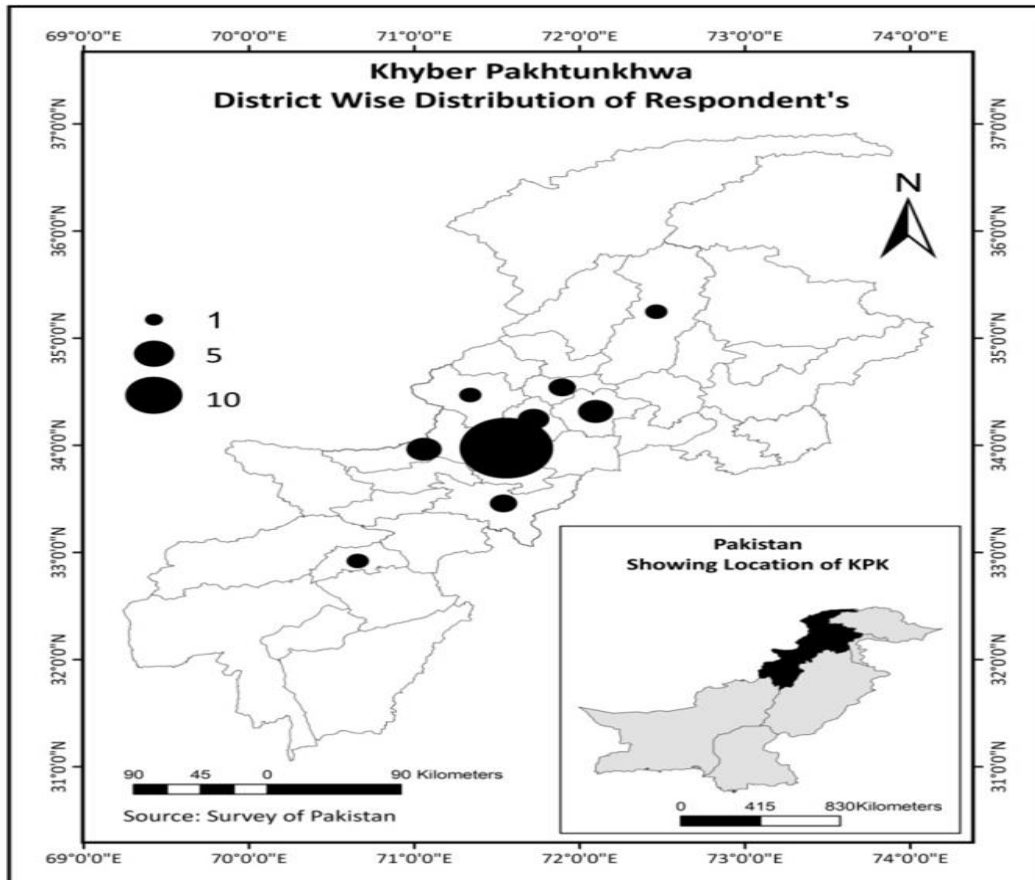
Similarly, injecting drug use (IDU) in the country is recently introduced. According to an estimate in 2006 the number of injecting drug users (IDUs) in Pakistan are 125,0008, which suppose to be double in 2000 (UNODC 2008). This is a matter of great concern particularly in terms of the increasing risk of HIV/AIDS expansion. Though Pakistan has a severe drug problem to deal with, the data available to understand, and respond to the problem is inadequate. National Assessment Report on Drug use in Pakistan UNODC 2006 suggests 0.7 percent of KPK population is opiate users while another 0.06 percent are injecting drug users (UNDOC 2006).

Numerous studies have established associations between teen drug abuse and low self-esteem, depression, antisocial behavior, rebelliousness, aggressiveness, crime, delinquency and poor school performance (Jessor & Jessor 1977; Johnston & Eveland 1978; Kandel et al. 1978). Psychologists consider early drug use as one of the important cause of antisocial behavior (Farrell & Taylor 1994; Farrington 1983). Drug addicts have a poor personality and low self esteem and turn to drugs to escape their problems (Angold et al. 1991; Barnes et al. 1986). Individual employs drugs to alter or cope up perceived social, psychological problems. Feeling of anxiety, alienation, depression and perturbation can be altered and or modified by use of specific drug of choice (Fuqa 1977; Milkman & Frosch 1973; Wurmser 1974). Addict once learn the psychological significance of drug as a refuge from family disappointment and hurt, stick to it (Kelly 1975; Weech 1966).

## Methodology

The study was conducted in a private sector Drug abuse treatment center located in Hayatabad, Peshawar. A total of 61 respondents agreed to complete the questionnaires and become the sample size for the present survey. Respondents' involvement in the survey was enhanced through personal requests and through reference by doctors and key informants. The study used open interviews and questionnaire for data collection. Questionnaire included both open and close ended questions. Before the formal field work, a pilot survey was conducted in order to pretest the questionnaire. The questionnaire was prepared in local language i.e. Pushto consisting of questions about socio-economic and demographic profile of the respondents, patterns and intensity of drug use and the level of drug awareness. The completed questionnaires were tabulated and processed using Microsoft Excel. The data was plotted through tables and figures in order to interpret it in a meaningful way.

## MAP 1



## Results and Discussion

This study covers three major parameters about the socio-economic and historical background of the drug abusers: demographic characteristics; drug use history; and patterns and practices of drug use.

### Demographic Characteristics

The following major variables were investigated and interpreted regarding the demographic characteristics of the respondents.

### Age of Respondents

A considerable proportion of the respondents i.e. 26% were in the age group of 21-25 years old. Another 11% of were aged 26-30 years and another 20% were 31-35 years old. The highest percentages of drug users were aged between 16 and 25 years old (table 1). The respondents surveyed belong to different parts of Khyber Pakhtunkhwa. Majority of respondent belong to district Peshawar, 57% followed by Mardan, 8% (map 1).

**Table 1: Ages of Respondents**

Age	No. of Respondents	%Age
16-20	12	20
21-25	16	26
26-30	7	11
31-35	12	20
36-40	5	08
41-45	6	10
46-50	2	03
66-70	1	02
TOTAL	61	100

Source: Field survey

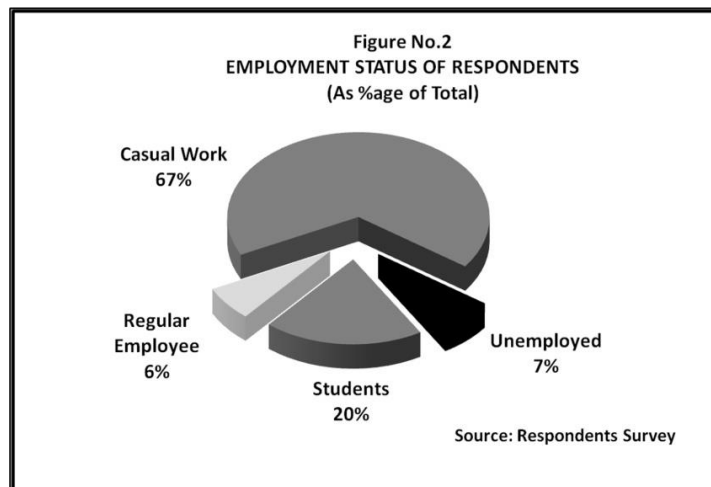
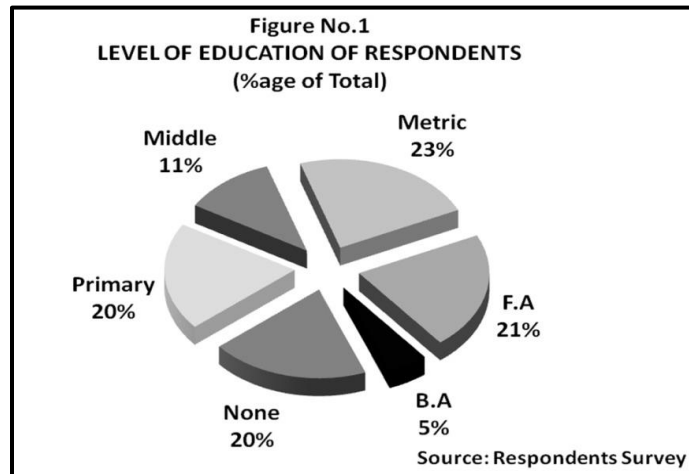
### Level of Education

Although twenty percent of respondents were uneducated, the rest were educated to certain levels. The analysis of data reveal that majority of the educated respondents are matriculate i.e. 23 percent. Surprisingly 21 percent of respondents acquired intermediate level of education (fig 1).

### Employment Status

Fig 2 indicates that 67 percent of total respondents are casual workers, while only 07 percent were engaged as regular employees. Other 19 percent of the respondents were students and were enrolled in various educational institutions.

Moreover, it was also observed that the highest number of drug abuse amongst respondents, were found in casual workers followed by the students.

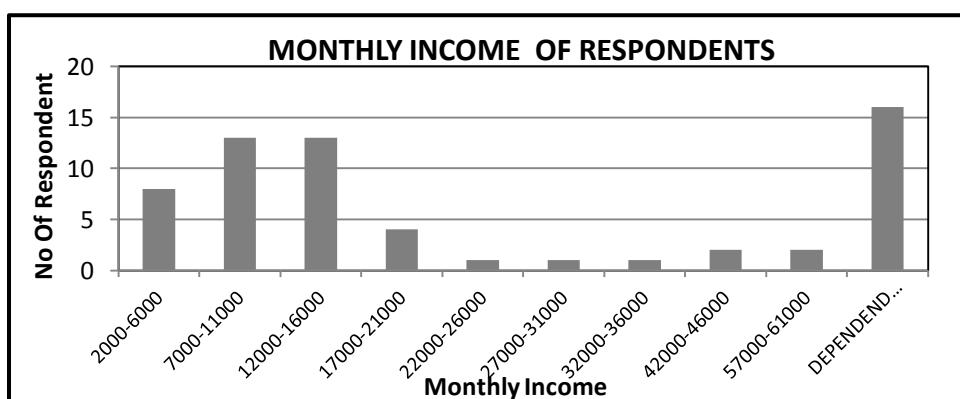


### Monthly Income

Income is one of the standards indicators of economic wellbeing and it is comparable with educational accomplishment and occupation as a measure of socio-economic status. Among all the respondents, 26% reported no income and those are mostly students dependent on their parents. More than 24% of the

respondents have their monthly income in the range of 2000 to 11000 Rupees. While another 10% of the respondents have their monthly income in the range of 22,000 to 61,000, which clearly indicates that for them, addiction is not because of financial problems (Fig. 3).

Figure 3: Monthly Incomes



### Marital and Residency Status

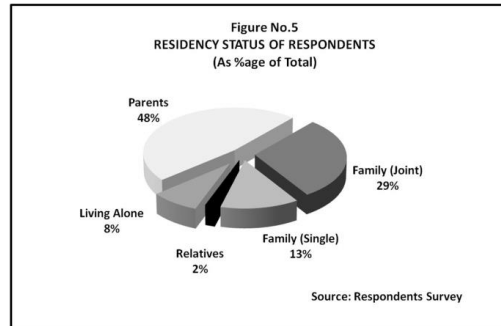
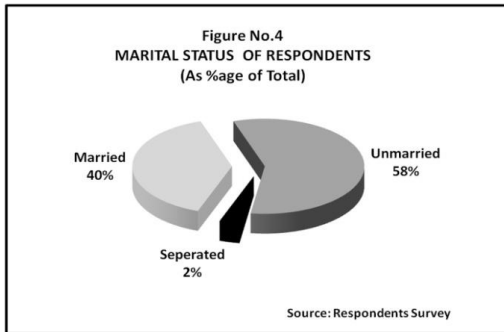
Majority of the respondents (58 percent) were unmarried, while 41 percent were married besides 02 percent had already been divorced or separated. Even among the 41 percent married respondents 20 percents are facing problems in family relationship and are in the midst of breakup and divorce (fig 4). As far as the residency pattern is concerned, 48 percent of respondents were living in single family with their parents, 30 percents in Joint families with their uncles and parents, while 08 percents were living either living alone are homeless (Fig. 5).

### Drug Use History

#### Age at the Initial Stage of Drug Use

Majority of the respondents i.e. 46% were of the view that they used drug for the first time before the age of fifteen years, while 43% initiated drugs when they were 17-21 years of age. It simply means that 89 % of the respondents started using drugs between 12 to 21 years, while the average age of drug use initiation was 23 years (table 2). Cannabis (Chars) along with heroine was most commonly used drugs at the time of initiation. Alcohol was found to be the initial drug for 16%, and Cannabis (Chars) for 22%. According to respondents the intake of opium

leads to euphoria and they initially start taking it as stimulant but soon they become addicted. Surprisingly Cannabis (chars) is favored mostly by students. The respondents believe that initially they took cannabis because of a famous myth that it increases the brain functionality (Table 3).



**Table 2:** Age of Respondents at the time of initiation of drug

Age when first time used drug	No. of Respondents	%age
7 to 11	1	1.5
12 to 16	28	46.0
17 to 21	26	43.0
22 to 26	2	3.2
27 to 31	3	5.0
32 to 36	1	1.5
Total	61	100

### Reasons for the Initiation of Drug Use

The respondents listed seven different reasons which they sensed had caused them to addict. Easy availability of drugs and peer pressure (16 and 30 percent respectively) were identified as two main reasons for initiation followed by insomnia and depression (table 4). Beside 13 percent respondents blame friends and relatives who initially introduced them to drugs during social gathering. Eleven

percent started drug use initially for pleasure and then they stick to it. Another 10 percent of the respondents had no idea how they started but now on the road to addiction.

**Table 3:** Type of Drug Used

Type Of Drugs Used	No. of Respondents	%age
Snuff	45	25
Cannabis (Chars)	40	22
Heroin	30	17
Alcohol	28	16
Pills	19	09
Opium	11	06
Injectables	6	03
Total	179	100

**Table 4:** Reasons for Initiation

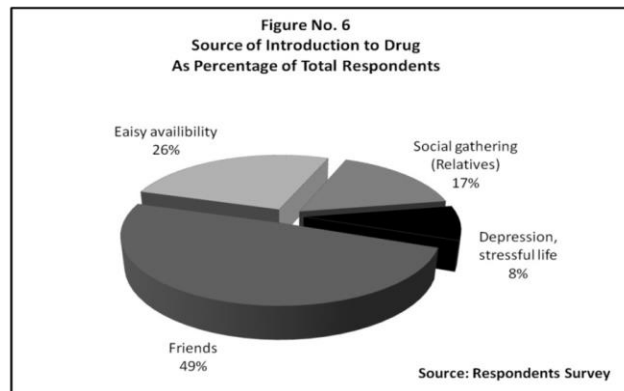
Reasons	No. of Respondents	%age
Pleasure seeking	7	11
Stressful life	6	10
Insomnia/ Depression	06	10
Social Drinking/Smoking	08	13
No response	06	10
Easy availability	10	16
Peer Pressure	18	30

### Source of Introduction to Drugs

Peer pressure (30 percent) appears to be one of the substantial risk elements for starting drug use. As depicted in Fig. 6, the majority of respondents (49 percent) were introduced to drugs by their friends. The easy availability of drugs on the



street was favored by 26 percent respondents. Another 17 percent respondents were introduced by relatives during weddings and social gatherings. This simply means that 66 percent respondents were introduced to drug use by the persons known to them i.e. friend and relatives. While remaining 8 percent of the respondents damned tension, depression and stressful life for initiating drugs.



## Patterns and Practises of Drug Use

### Type of drug Used

Snuff is the most common form of drug abuse, used by 25% of the respondents followed by Cannabis (Chars), 22%, Heroin 17% and Alcohol 16% (table 5). Opium was used by 6% of the respondents, while the least preferred form was the injectable drugs used by only 3% of the total respondents. It was noted that heroin, chars and alcohol are more commonly used in Peshawar by the younger addicts while tranquillizers and opium abuse was more prevalent among the older respondents.

### Single and Multiple Drug Abuse

Multiple drug abuse is defined by Bozarth (1987) as the use of two or more drugs for non-medical purpose. Multiple drug users use additional drugs in case of non availability of drug of their choice. Beside they may proceed from one drug to another to intensify the effects. In this survey, almost all the respondents were multiple drug users. Out of total, 92 percent were using 2 types of drugs, 05 percent using 3-4 different types of drugs, while rest 03 percents using 5-6 different types of drugs.

**Table 5:** Type of drug Used

Type of drugs used	No. of respondents	Percentage
Snuff	45	25
Chars	40	22
Heroin	30	17
Alcohol	28	16
Pills	19	09
Opium	11	06
Injectables	6	03
Total	179	100

**Table 6:** Single and Multiple Drug Abuse

No. Of Drugs Used	No. of Respondents	Percentage
1-2	56	92
3- 4	3	05
5- 6	2	03
Total	61	100

### Mode of Intake

Majority of respondents were heavy users toked an average of 35 joints each week, while light users smoked less than five joints a week. Majority of the respondents i.e. 74 Percent toke drug by smoking. Opium, bhang, Heroin and chars are primarily used by smoking, and alcohol and tranquillizers are consumed orally which is favored by 10 percent of respondents. Heroin is usually taken in the form of smoking and fumes inhaling.

### Expenditure on Drugs

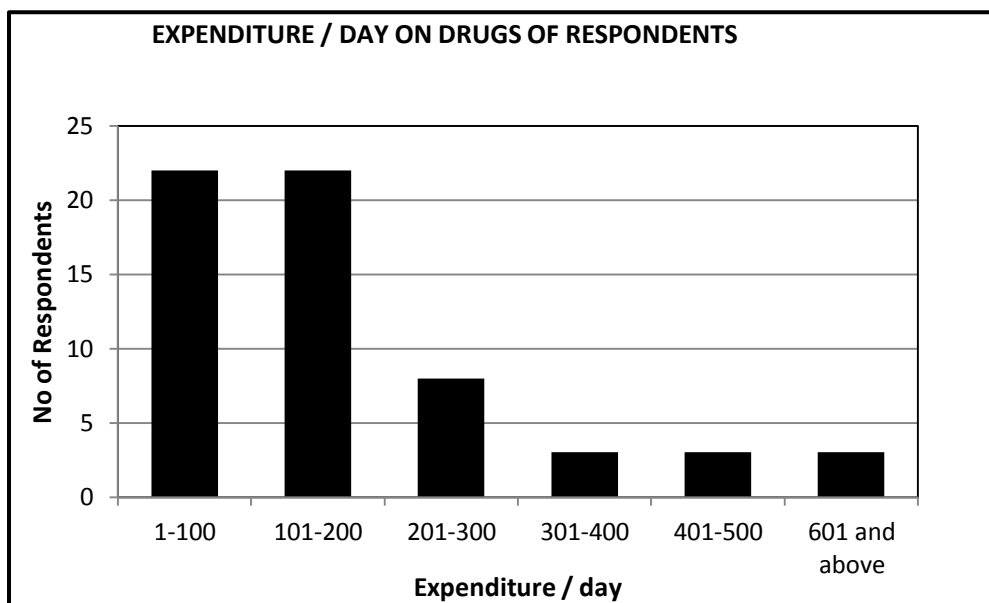
Majority 72% of the respondents stated that they spend up to 200 Rupees per day on drugs, 13% spend between 200 and 200 Rupees per day while another 5%

spend more than 600 rupees per day on drugs (fig 6). The high spending respondents are mostly those drinking alcohol.

**Table 7:** Mode of Intake of Drugs

Mode Of Intake	No. of Respondents	Percentage
Inject	6	10
Smoke	45	74
Drink	10	16
Total	61	100

**Figure 6:** Drug Expenditure

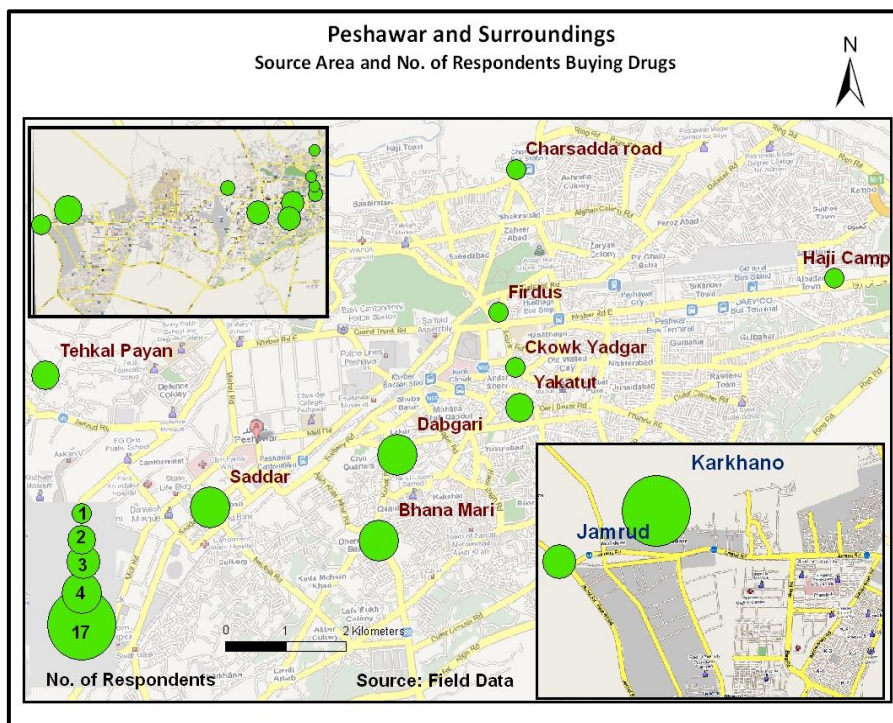


### Awareness and Knowledge about Drug Abuse

Most of the respondents i.e. 80% were of the view that they had no idea about the dangerous effects of drugs prior to its use. The other 20% reported that they were

having a little knowledge of the side effects of drugs prior to initiation. The respondents were aware of HIV/AIDS but had no information about its symptoms, transmission and prevention methods. The respondents were mostly unaware of hepatitis B and C infection, and had little or no precise information about its symptoms or preventive measure. Although 34% of the respondents, who use injectable drugs, made an effort to clean their needles and syringes however they don't have any idea of proper sterilization. Regarding the availability of drugs when the question was ask about the source area from where the respondents buying/getting their drugs, majority (34%) of respondents conform that are getting it from Kharkhano area (Map 2 below).

MAP 2



## Conclusions

The use of legal and illegal drugs has a long history in Pakistan but unfortunately the problem of drug addiction is often overshadowed by poverty, lack of basic health care and illiteracy etc. This research was conducted to study the factors and

consequences of drug addiction in Peshawar, types of drug used and the sources of availability of these drugs. For majority of respondents drug abuse is a response to fear of failure; it starts as a temporary feeling of relief from the pressures of achievement but then, over a period of time, becomes a goal in itself. An addict makes that first choice to try out a drug and from point onward; the drug takes on and controls him. In this regard the easiest way to control addiction is not to get addicted in the beginning.

One of the most important factors in narcotic addiction seems to be the degree of access to narcotic drugs. This factor was favored by 16% of the respondents, and this explains why narcotic addiction rates are higher in the urban slums than in rural areas. Thus, no matter how susceptible individuals are, nobody can become addicted to narcotic drugs without access to them. Majority of the respondents participated in this research fall in the age group of 16-25 years. The areas which need further consideration for research include the consequences of drug use on the society and health. Efficient treatment and preventative measures demand an authentic database, on which suitable measures can be adopted. Further information is required for the proper understanding of the conditions of drug abusers and their surroundings. The educated and uneducated drug abusers should be dealt with different preventative measures. Rapidly increasing heroin and tranquillizers need Special attention. Undoubtedly, the use of manufactured psychotropic drugs is continuously increasing, mainly because it is easily available over the counter, thus contributing to the ramification of the problem. Physician should be very cautious in the prescription of tranquillizers. Over-the counter sale of any possible addictive medicine should be strictly prohibited.

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Journal of  
**Humanities &  
Social Sciences**

JHSS XXIII, No. 3, 2015 (December)

## Search for Conjugal Bliss in *Cat on a Hot Tin Roof*

Irshad Ahmad Tabasum<sup>a</sup>, Muhammad Kamal Khan<sup>b</sup>

<sup>a</sup> Govt. Postgraduate College Khanpur, RY Khan, Pakistan

<sup>b</sup> Shaheed Benazir Bhutto University Sheringal Dir Upper, Pakistan

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### Abstract

The conjugal life of Maggie and Brick is on the verge of collapse because the former is heterosexual and the latter is homosexual but Maggie leaves no stone unturned to save such a life. She has to fight on two fronts. Firstly, she has to restore the broken masculinity of Brick into wholeness. She revitalizes Brick's passive and latent physicality with her aggressive sexuality. She tries to arouse his sexual jealousy by mentioning how other men show sensual desire for her. Secondly, her childlessness marginalizes her in the worst way. She passes through endless envy when she compares her childlessness with the five children of her sister-in-law and becomes catty whenever she faces them. It is true that she tells a lie about her pregnancy because she knows that truth will not work in the world she lives. Moreover, her love for her husband is so potent that she succeeds in convincing him to turn the lie into a reality. Maggie is blunt in her love and hatred. She is a strange mixture of kindness and cruelty. In this way she not only outwits all those ready to destroy her marital bliss but also rejuvenates the paralyzed sexuality of her husband with her aggressive sexuality. So love is a force with which Maggie faces her predicament and emerges stronger, happier and better off than before.

**Keywords:** Brick, Maggie, degeneration, rejuvenation, barrenness, fertility, security, insecurity

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## Introduction

The domestic life of Brick and Maggie, in *A Cat on Hot Tin Roof*, is at risk because of their sexual incompatibility. Psychologically speaking, Brick is sexually passive and Maggie is sexually active. Brick believes in idealism while Maggie believes in pragmatism. Their conjugal relationship weakens day by day because of their different attitude towards their sexual life. Brick consciously negates his latent homosexuality while Maggie consciously makes him realize his homosexuality. Maggie articulates her disgust for homosexuality while Brick does not find a way to say about his homosexual relations with his friend. The husband becomes neurotic in his negation and the wife becomes ruthless in her assertion. Seen from the Jungian perspective, their married life is bound to be troublesome. Maggie is an “extrovert wife” (Evans 1976: 108) who gives voice to what she feels and observes. She cannot grow blind to the reality of her present childlessness and the poverty of her past. Her existence is threatened and she feels worthless before her fertile and scheming brother-in-law and his wife. Such a fear is visible in her discourse. But she plans masterfully to outwit all those ready to destroy her marital bliss. She uses sex as a sword and shield to defeat and deceive the Goopers, who want to uproot her. On the other hand, Brick is an “introverted-intuitive husband” (Evans 1976: 108) who makes his life a miserable mess after the death of his friend, Skipper. He indulges in self-deception by idealizing and spiritualizing a worldly love. As a result of it, he fails to cultivate a true relationship with himself and yearns for truthfulness without realizing his own “mendacity” (*Five Plays* 57). He is never ready to accept homosexual tendencies in his life. This denial leads him to a severe sexual crisis. He withdraws his physical contact with his wife, but his wife continues to offer him a valuable emotional support. She has the potential to deal with such incompatibility and succeeds in saving her conjugal life.

## Discussion and Analysis

The unrequited love of Maggie’s husband makes her a sex-starved woman. She makes love with Skipper to realize Brick’s closeness with this act. She admits to Brick: “Skipper and I made love, if love you could call it, because it made both of us feel a little bit closer to you.... we made love to each other to dream it was you, both of us” (*Five Plays* 26)! Maggie’s life is full of many lacks; her past is poverty-stricken and her present is a loveless marriage. She is deprived of sexual fulfilment and companionship and her childlessness further intensifies her insecurity. She is marginalized by the Pollit family in the worst way. She, in fact, fights for some space in the family. Her husband is not ready to recognize her person. Gooper, the brother of her husband, is scheming all the time to deprive her of all the inheritance while his wife, Mae, keeps on accusing Maggie of being barren. The

other members of the Pollit family remind her on every step that she is childless and that she never belongs in the first place. Even Dixie, the little girl of the Goopers, makes fun of Maggie by sticking out her tongue at Maggie and reminding her of her barrenness. Maggie is badly hurt when Dixie reminds her of the fact that she is jealous of them only because she fails to produce any child. Maggie is not made for swallowing such remarks. She is compelled to ignite Brick's sexuality by saying him how his brother and his sister-in-law proudly make fun of Brick's childlessness in front of their children. Maggie's desire to have well brought up children and pour out all her caressing love upon them reaches its the climax when she expresses the same to Big Mamma. She desires to have a child by Brick because the child not only promises the power of inheritance but also rejuvenates her marital bliss. She is bent upon mothering a Pollitt child so that she can compete with Gooper and Mae for the best position in the family. She thinks and plans positively about whatever life throws at her. This gives her the chance to rise above circumstances and handle them successfully. Her husband is unwilling to have her in the bed and desires to terminate the marriage but she uses every tactic to make a lasting relationship with such a husband. Comparing Maggie's predicament with that of Blanche, Marc Robinson considers Maggie's position more precarious:

Blanche may seem more alone than Maggie, but Blanche at least has the ability to affix herself to another person and stay there a while. Maggie can't even do that—she has neither sister nor a likely suitor. If Brick even so much as notices her flirting with him, he's disgusted. Maggie always feels useless—never more so than when she's reminded that she's bounded in a sexless marriage, and so is doomed to childlessness (Robinson 1997: 45).

Maggie is badly disintegrated in the Politt family because nobody is ready to reintegrate her. She is all alone in her struggle for survival but she dose not lose heart even when nobody supports her. It is the irony of situation that puts her in the most vulnerable position but she faces it quite bravely. Instead of bogging down in the face of testing situation she remains upbeat and approaches the stress of uncertainty with self-belief. Her determination to rejuvenate the dead passions of her husband is insatiable. She engages her strengths and resources in such a way that her limitations turn into her achievements. Her strength lies in the fact that she is capable of seeking possibilities in adversity. It is true that she tells a lie about her pregnancy but she leaves no stone unturned to turn the lie into a reality. She discloses to Brick that she has been to a gynaecologist in Memphis who examined her completely. The report of the doctor shows that they can have a child whenever they desire. She emphatically addresses Brick to bed with her because "this is her time by the calendar to conceive" (*Five Plays* 30). Her problem is how

to have a child by a man who cannot stand her. She engages all her faculties to “work out” (*Five Plays* 30) that problem. She remains adamant and nonplussed in the face of adversity. It is because of such qualities that she is considered as “one of the most determined female characters in modern drama” (Blackwell 1997: 247).

Maggie’s sexual drives may be potent but her love for her husband is equally powerful. This is what urges her to save Brick from the “once-perfect relationship with Skipper” (*Five Plays* 66). Nancy Tischler comments, “Brick, knowing how Maggie forced this intolerable self-realization on Skipper, sees her as his enemy, while Maggie feels that this, like everything she does, was a testimony of her all-embracing love for Brick” (Tischler, 1961: 201). Brick’s instincts are arrested because of his dysfunctional marriage. Such a situation leaves a crippling impact on his psyche and it is reflected by his crutch, which is a “Freudian phallic symbol, the objective correlative of his sexual, emotional and moral paralysis” (Thompson 2002: 63). His sexuality is further crippled when Big Daddy hunts out his homosexuality as he admits to Big Daddy that once Skipper made a long distance call to him and made a drunken confession to him and on which he hung up. Instead of wandering in the illusory world of wine, Big Daddy compels him to face reality with Skipper to avoid disgust with himself and with mendacity. His disgust with mendacity, Big Daddy tells Brick, is disgust with himself: “You – dug the grave of your friend and kicked him in it – before you’d face the truth with him!” (*Five Plays* 51). Brick’s masculinity is totally broken when his father accuses him of homosexual inclinations. Under these conditions, Maggie becomes a vital life force to restore Brick’s divided self into wholeness. She becomes kind with Brick and tries to bring him out of the insecurity his masculinity is threatened with. If masculinity is viewed as a power discourse, then Maggie emerges with a lot of masculine traits. Purnendu Chatterjee does not confine masculinities to men only but believes that masculinities are relational and that “Discourses of masculinity are available to, used by and imposed upon both men and women” (Chatterjee 2012: 110). So Maggie succeeds in reviving her marital life with her aggressive discourse.

### **Dream of Blissful Conjugal Life is realized**

Maggie becomes a true symbol of life force when she asserts that “life has got to be allowed to continue even after the dream of life – is – all over” (*Five Plays* 57). She keeps on coaxing and cajoling Brick in spite of the fact that Brick spares no opportunity to berate and belittle her. It is her unconditional love for Brick, “her fierce determination and impassioned sexuality” (Crandell 1998: 114) that enables her to actualize the dream of blissful conjugal life. So love is a force with which Maggie faces her predicament and emerges stronger, happier and better off than before. Viktore Frankl’s comments on the force of love are worth quoting here:

Love is the only way to grasp another human being in the innermost core of his personality. No one can become fully aware of the very essence of another human being unless he loves him. By his love he is enabled to see the essential traits and features in the beloved person; and even more, he sees that which is potential in him, which is not yet actualized but yet ought to be actualized. Furthermore, by his love, the loving person enables the beloved person to actualize these potentialities. By making him aware of what he can be and of what he should become, he makes these potentialities come true. (Frankl 2004: 116)

Like a playful sex kitten, as she admits, “I’m Maggie the Cat!” (*Five Plays* 20) she maintains her aggressive sexuality. She becomes bitchy on certain occasions but it is all because of the constant rejection she has been facing. Her desire to mother a child is so potent that everything else recedes in the background. She succeeds in luring her husband to the bed because she wants to fully realize the wonder and beauty of motherhood’s experience. She becomes wild like a feline for her rights because she knows that offence is the best defence:

Maggie struggles to wrench life out of her alcoholic husband with the cunning, persistence, and sensuality of a feline. Maggie, who is the ‘cat’ of the title, has scratched and clawed her way out of poverty, and she is determined to hang on to her marriage, with the tenacity of an alley cat struggling to stay alive in the streets. Maggie can purr also when it becomes necessary. Her attempts to seduce her husband and flatter Big Daddy are catlike. When Maggie walks, her whole body is in motion with feline grace (McGaw & Clark 1987: 100).

She uses every fair and foul means to support “a broken, irresolute man” (*Five Plays* 112), arouse his deadened passions and keep the marriage afloat as Nancy Tischler says: “her lust for life takes brutal forms...” (Tischler 1977: 507). Foul becomes fair for her whenever she tries to seduce the latent sexuality of her husband: “Whether Brick is gay or not, she will do whatever it takes to avoid poverty in her old age” (Krasner 2006: 55). She is as aggressive in her sexuality as her husband is passive. She adopts aggressive male sexual role to revitalize Brick’s latent physicality. Like a caring and compassionate companion, she talks to Brick with her caressing words. She believes that their sex life will revive as suddenly as it has stopped working, because it has not diminished in the natural and usual way. She leaves no stone unturned to maintain her prettiness so that her husband feels as attracted towards her as other men are. She knows that other men follow her in the most curious manner because her body, her hips and her breast still stay high on her. She prays earnestly that Brick may want her as anxiously as other men want her. She knows that she still turns heads on the streets but the admiration

and attention she gets from the other men is totally valueless for her because she expects the same from her husband. Like an intelligent therapist, she knows about sexual jealousy among men and tries to arouse in Brick as well:

Why, last week in Memphis, everywhere that I went men's eyes burnt holes in my clothes, at the country club and in restaurants and department stores, there wasn't a man I met or walked by that didn't just eat me up with his eyes and turn around when I passed him and look back at me" (*Five Plays* 21).

She knows that her love making with her husband was blissful and heavenly and reminds Brick of the days when they were happy in each other's arms. She romanticizes her past in such a way that leaves some impression on the heart and mind of her unromantic husband. By persuading Brick to become her accomplice in her lie she, in fact, releases him from the shackles of liquor and crutch. In the end she breaks his liquor bottles, locks his cabinet of liquor and throws his crutch. Instead of challenging the forged pregnancy of Maggie, Brick acquiesces by "keeping still" (*Five Plays* 90). Maggie is apt to observe Brick's gallantry which he observes to save the face of his wife. She admits loving gestures of Brick in the most ecstatic manner. Brick's gallantry proves that he is ready to quit the illusory world of alcohol and accepts the relationship of flesh-and-blood. "In the revised Broadway version... Brick expresses his admiration for Maggie and her concluding speech is expanded, emphasizing her strength and thus the likelihood of reconciliation" (Bigsby 2005: 283). She puts up her fight so bravely and succeeds in bringing her husband to her body.

Maggie knows well that truth may not work in her situation. She tells a lie about her pregnancy because she knows that 'mendacity' is way of the Pollitt living. She knows that every member of the family is telling a lie in one way or the other. Maggie not only challenges Brick's homosexuality but also his false and pretentious morality. She knows that people pretend goodness but she dislikes such pretensions. She challenges the conventional moral patterns of the rich who try to hide their dirtiness under the cloak of their moral blackmail. Instead of stressing on morality, she stresses upon honesty. She knows that she was born of a poor family and led a miserable life in the thick of poverty but she is never ready to die poor. That is why she tries her best to grab as much as she can from the property of her dying father-in-law. She convinces Brick that the living is more valuable than the dead. She tells him that Skipper is dead and his father is going to die of cancer so soon but she is still alive and worthy of his attention.

Maggie lives among the people who are either indifferent or unsympathetic towards her. Such a situation coupled with “poverty and economic security cause a stressful life” (Myles 2012: 93) for her but such a stress makes her mentally tough. It is her mental toughness with which she persuades her husband to compromise with her. Similarly, she manages to tell a lie before everybody confidently and announces about her pregnancy ignoring all the repercussions of her lie because such a lie “feeds Big Daddy’s and Big Mama’s appetites for illusion (Cafagna 1997:129). Maggie’s lie may look irrational because her husband is never ready to bed with her. She still ventures because “the instinctual desire lies in the domain of the irrational” (Veyu 2012: 32).

By becoming accomplice to Maggie’s lie Brick, as Tennessee Williams suggests, will go back to Maggie for sheer animal comfort, (Williams 1978: 73). In this way, Brick not only secures his inheritance of twenty-eight thousand acres of the land but also tries to atone for the miseries he brought for Maggie as Robert Heilman suggests, Brick’s earlier refusal to sleep with Maggie is interpreted as his way of punishing her for causing Skipper’s death, then Brick’s resuming sexual relations with Maggie implies that he has stopped blaming her and makes possible his acknowledgment and understanding of his own role – in Skipper’s death and in his and Margaret’s subsequent misery (Heilman 1973: 125). He neither divorces her nor forgives her, but becomes an accomplice to her lie at the end of the play. Arthur Miller compares his condition to that of “Hamlet who takes up his sword and neither fights nor refuses to fight but marries an Ophelia who does not die.” (Miller 1978: 191). Brick’s compromise at the end of the play shows that he gets ready to buy an inheritance by endorsing Maggie’s lie and re-enters the world of normal relations.

Maggie is blunt in her love and hatred. She is a strange mixture of kindness and cruelty. She is gentle and generous with Brick but vengeful and venomous with the Goopers. By highlighting the hawkish intentions of Goopers she succeeds in winning the sympathies of Brick. So Brick agrees with her “to have an heir, because his loathing for a shifty brother and sister-in-law is worse than that for his own unscrupulous wife” (Coleman 1997: 45). Maggie is frank and open about her love making with Brick in the past. She remembers the days when Brick was majestic in his love making. He never showed undue longing or excitement but used to remain calm and composed. His indifference and perfect confidence was natural which made him so lovable. His composure during the love making made him a wonderful lover. Her heart is badly pricked with the pain of loneliness when she misses all those blissful days.

Maggie shatters Brick's sexual illusion with her fearless sexual openness. Maggie is possessive about her husband, aggressive in sexuality, determined to defend her rights and malicious in hatred for her enemies. She tries her best to help Brick come out of the self-inflicted quagmire of guilt and doubt and prays for the day when their marriage will be rekindled. She, at last, rekindles the dead sensuality of her husband and seduces him to bed. Williams believes that "Seduction is too soft a word. Brick [is] literally forced back to bed by Maggie, when she [confiscates] his booze..." (Williams 1975: 169). It is the life force of Maggie with which she seduces the dead sexuality of her husband. She uses every possible weapon, including her body and her voice, to enliven that which is dead in her husband. She is as straightforward about Brick's booze or his relation with Skipper as about the cancerous death of Big Daddy. "Maggie, like cancer, is the harsh reality the Pollitt family must learn to live with. In a family where reality itself is an illusion, she must win Brick back to her bed and secure Big Daddy's rich lands despite her lack of offspring" (Cafagna 1997: 122). Maggie emerges victorious in the final moments of the play. She defeats the impending death of Big Daddy by bringing a new life with her pregnancy. Thus her ultimate triumph, in the words of Bernard Dukore, represents Williams' affirmation of life against death. (Dukore 1963: 98). Similarly, it is the life force with which Maggie's healthy heterosexuality overpowers the sickly homosexual commitment of Brick to Skipper.

## Conclusion

Animal instincts find prominent place in the plays of Williams because he measures human psyche by using the Freudian yardstick. The shadows of death and destruction are looming large on the Politts but it is the heated passion of Maggie which becomes their saving grace. The Big Daddy is dying of cancer and his son Brick embraces a living death in booze when he realizes that he has failed to live up to the sexual standards of the society. The dying Big Daddy wants to hand over his inheritance to his favorite son, Brick but Brick is childless. His marriage is on the verge of collapse and he is not even on speaking terms with his wife Maggie because she is a constant reminder of his youthful humiliation. Maggie's lust for life is insatiable. By persuading Brick to become her accomplice she heals his broken spirits of Brick. She tries her best to help Brick come out of the self-inflicted quagmire of guilt and doubt. She succeeds in rekindling the dead sensuality of her husband. Maggie is direct and straightforward and therefore does not depend on the illusionary world of dreams. She is pragmatic and it is natural for such a person to use every possible weapon to achieve her aims. Maggie defeats Mae and Gooper and emerges victorious in the final moments of the play. She defeats the impending death of Big Daddy by bringing a new life with her pregnancy.

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Journal of  
**Humanities &  
Social Sciences**

JHSS XXIII, No. 3, 2015 (December)

## Relationship between Organizational Environment & Organizational Commitment: A Case Study of Medical Colleges in Peshawar

Kausar Takrim<sup>a</sup>, Atiq-ur-Rehman<sup>b</sup>, Suleman Amin<sup>c</sup>

<sup>a</sup> College of Home Economics, University of Peshawar, Peshawar, Pakistan

<sup>b</sup> Department of Management Sciences, University of Peshawar, Peshawar, Pakistan

<sup>c</sup> Department of Economics, University of Peshawar, Peshawar, Pakistan

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### Abstract

The purpose of the study is to determine the relationship of organizational environment with the three dimensions of organizational commitment (affective, continuance and normative organizational commitment) among faculty members of public/private medical colleges in Pakistan. A random sample (N=71) is comprised of full time faculty members of one public sector and two private sector medical colleges operating in Peshawar (Pakistan). Following Allen and Meyer's (1990) approach to OC, data was gathered through questionnaire as the survey instruments. Pearson correlation was computed to analyze the relationships of organizational environment and the sub scales of organizational commitment. The results of this study show statistically positive relationship between organizational environment and all the three dimensions of organizational commitment, and that the majority of faculty members are experiencing greater organizational commitment (affective, continuance, and normative) in the presence of a healthy and positive organizational environment. These findings have implications for recruitment of new faculty members and retention of old ones. Therefore, this study provides empirical data to support theoretical models that focus on organizational environment as antecedents to organizational commitment. Efforts should be made by college deans/principals and faculty members in developing a progressive organizational culture to enhance the organizational commitment of its members.

**Keywords:** organizational environment, organizational commitment, normative commitment, Continuance commitment and affective commitment.

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## Introduction

A thorough evaluation of the faculty members from all aspects is essential for academic development and promotion of an academic organization. The Faculty members can be evaluated in their teaching style, research work, cooperation with students, their creativities, their cooperation with coworkers and their services. Faculty is anticipated to be cooperative and willing to work on research and development, they have to be engaged in serious and important research work for organization, and they are supposed to participate in positive and fruitful activities useful for academy discipline and research and development. This is very important and necessary for an organization to provide better work environment to their employees, especially in academic settings, in order to produce cream students and researchers. An academic organization should make a good link between the organizational environment and organizational commitment. Beside organizational environment there are other factors also which affect the level of organizational commitment of faculty members i.e., pay, benefits, supervisory role, career development and training system especially in academic settings.

In Pakistan, very limited research is being conducted on the topic and more is needed in order to understand the issue under discussion. Educational institutions like universities, colleges and schools emphasize more on goodwill, publicity, image, reputation etc. and less importance is being given to authentic and valuable research and development. Moreover, little research on organizational environment and organizational commitment can be found in the educational institutions of Pakistan.

It is very critical and complex to understand the organizational environment that affects the commitment level of teaching staff of medical colleges. Achieving provision of instructors, teachers and researchers is a critical issue. As faculty members try to enhance and make reforms in their research activities, their way of teaching, their attitude towards coworkers and students may vary their level of commitment towards their institute concerned. Besides good research activities and good teaching methods, the HR policies for planning and forecasting of staff member's needs, policies for their retention etc. must also be enhanced so that no more deficiency can be seen in the pool of qualified faculty members. The provision of updated knowledge regarding modern education system can increase faculty's ability to perform their duties in a more effective and efficient manner. The organizational environment is one of the highest antecedents to organizational commitment. This study aims to bring some additional insight into the issue by establishing association between the organizational commitment and organizational environment. The study in hand aims to determine that how the organizational

environment influences the organizational commitment level of full time teachers of medical colleges in kpk, Pakistan.

## Literature Review

### a. Organizational Commitment

According to the research study conducted by Porter, Steers, Mowday, & Boulian (1974:603), Organizational commitment can be defined as the involvement and identification with a particular organization. Employees have a strong faith in following organizational goals, they believe in organizational mission, vision, values and culture, they want to struggle for the achievement of these goals, and want to continue their jobs in the concerned organization (Turner, 2001:80). Organizational commitment is a phenomena in which the organization and the individual shares some specific goals and values, they develop an atmosphere of trust, want to work there, and have a social network of colleagues, coworkers and friends inside the organization (Kanter, 1968:499; Mowday, Porter & Steers, 1979:225).

Allen and Meyer's (1990) proposed a three-component model: affective commitment (employees remain with the organization because they want to; AC), continuance commitment (employees remain because they need to; CC) and normative commitment (they remain because they feel they ought to; NC). The results of several confirmatory factors analyses support the above hypothesis of Meyer & Allen. Other studies revealed that all the three subcomponents of commitment have different correlations with different factors, especially they professed that organizational commitment have different consequences like attendance, turnover intention, and performance etc (Cohen, 1996; Hackett et. al., 1994; Meyer, Allen & Gellatly, 1990).

Commitment is the psychological state of an individual and many researchers have studied it from different perspectives (Allen & Meyer, 1990b:847; Kanter, 1968:503). These studies are based on how the organizational commitment develops, and what are its effects on individual's performance (Angle & Perry, 1981:2; Harshbarger, 1989:2; Porter L.W. 1974:603). Studies also show that there are different dimensions of commitment, which have different consequences for different variables or factors (Aven, 1988:11; Mathieu & Zajac, 1990:172). Cook and Wall (1980:41), working in a UK context, view OC as the "feelings of attachment to the goals and values of the organization, and attachment to the organization for its own sake rather than for its strictly instrumental values". This attachment takes three forms: identification (a feeling of pride and belonging to the

organization); involvement (the willingness to invest personal effort for the sake of the organization); and loyalty (attachment and obligation towards the organization). Research conducted by Meyer *et al.* (1980:719), reveals that there is a positive correlation between affective organizational commitment and supervisory ratings of performance while continuance organizational commitment is negatively related with supervisory ratings of performance.

Lin *et al.*, (2005:351) conducted study on the relationship of organizational commitment with Goal orientation. The results reveal that those employees who are getting promotions have a great learning goal orientation as compare to those who remain on the same posts for long term. The findings and results of various research studies indicate that turnover intention, performance, and attendance have significant correlations with Affective, continuance, and normative organizational commitment (Cohen, 1996; Dunham *et al.*, 1994; Meyer *et al.*, 1990). The level of individual's organizational commitment has significant effects on the organization and the individual (Mowday, Porter & Steers, 1982:246).

#### **b. Organizational Environment**

The aim of the research study is to determine the relationship of organizational commitment with organizational environment. To understand the phenomenon of organizational environment some articles of organizational climate has been studied, because the climate and environment of an organization has a close meaning. Organizational climate can be defined as the behavior in which the employees of the organization perceive and characterize the environment of the organization in which the attitude and mannerism is observed (Denison, 1996; Moran and Volkwein, 1992:150; Verbeke *et al.*, 1998:304). The organizational climate has a positive and significant relationship with involvement of employees in decision-making mechanism, and leadership styles (Allen, 1990a:16; Volkwein and Parmley, 2000:113). The results of some research studies show that organizational climate has a significant relation with job satisfaction (Johnson & McIntye, 1998:450), some other research results show that organizational climate and job satisfaction have a positive relationship, but are not of the same construct (La Follete & Sims, 1975:277). Razali (1999:9) conducted a comparative study, in which the findings revealed that the employees want to work in a flexible environment or climate, and where they feel that they are just like the part of the organization, and should be given some right to in decision making.

In South Africa in a research study conducted by Dr. Yoram Neumann (1978) of college faculty members, the organizational climate was examined in academic environment. Neumann studied the organizational climate in relationship with satisfaction at workplace. The aspects of climate studied were evaluation of financial and monetary reward/benefits, perception of power, and perceived organizational goals. The findings of the same research study reveal that subscales of organizational climate were differently related to job satisfaction (Neumann, 1978:275).

In prior research studies organizational climate was examined as dependent, independent, and intervening variable in relation with job satisfaction, leadership, organizational structure, employee performance, and organizational commitment. And the results show that satisfaction at workplace, leadership styles and behaviors, performance, organizational commitment and organizational structure have a positive relationship with organizational climate (De Cotiis & Summers, 1987:469; Hellriegel & Slucom, 1974:280). It can be derived that the antecedents of organizational climate / environment have significant relation with organizational commitment. But this relationship varies from situation to situation.

### **Methodology**

The researcher has the intention to explore and find out the relationship of organizational environment with organizational commitment using a co-relational approach. After approving the questionnaire for research from the principals, the teaching staff was asked to provide data by filling the questionnaire. The participants were asked to provide their demographical information, and information about organizational commitment, and organizational environment. Out of 66 items 18 were for organizational commitment (6 for each component), 42 for organizational environment while 6 for demographics. The 42 items of organizational environment were divided into 4 groups in order to know about the subscales of organizational environment i.e. Consideration (appreciation), Intimacy (relations with co-workers), Disengagement (no part in decision making) and production emphasis (task orientation).

Five-point Likert scale was followed (1= strongly agree to 5= strongly disagree, reverted where needed). The continuous variables organizational commitment (affective, continuance and normative) and organizational environment were examined using different statistical instruments. Co-relation test was applied on the data collected.

## Study of Variables

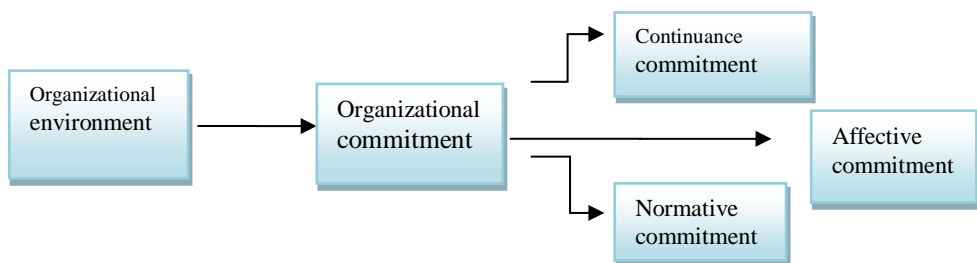
**Continuous Variables:** Organizational Environment (OE) and Organizational Commitment (OC)[(Affective(AC), Continuance(CC) and Normative(NC))]

**Demographics:** Age, gender, education and experience in the organization etc.

## Hypotheses

- There is a relationship between Organizational Environment and Organizational Commitment.
- There is a relationship between Organizational Environment and Affective Organizational Commitment.
- There is a relationship between Organizational Environment and Continuance Organizational Commitment.
- There is a relationship between Organizational Environment and Normative Organizational Commitment.

## Theoretical Frame work



## Analysis of Data

The purpose of this research study is to determine the relationship of organizational environment with organizational commitment and its three subcomponents – Affective, Continuance, and Normative Commitment.

## Results and discussions

The demographic data shows that 40.8% of the respondents were at the age of 20 -30 years, 18.3% of 31 to 40 years, 22.5% of 41 to 50 years, 11.3% were above

50 years and the rest 7% did not report their age. Further the sample selected for this research study is composed of 71 respondents/faculty members of medical colleges in Peshawar (Pakistan), 53.5% male, 43.7% female and 2.8% not reported their gender. The level of education of the participant show that 64.8% were having a bachelor (MBBS, BDS) degree, 23.9% master (MSc, M.S/M.Phil) degree, 5.6% doctoral degrees and the remaining 5.6% of participants did not report their educational information. Regarding job experience fifty one (71.8%) faculty members were having experience of up to 5 years, five (7.0%) faculty members between 6 and 10 years, five (7.0%) between 11 and 20 years, and three (4.2%) more than 20 years while seven (9.9%) did not report their experience. While out of them fifty two (73.2%) were lecturers, eight (11.3%) Assistant Professors, four (5.6%) Associate Professors, five (7.0%) Professors and the remaining two participants did not report their job status.

### Descriptive Statistics

Descriptive statistics and frequencies were used to calculate means and standard deviations for the demographical factors i.e. age, gender, education, and tenure etc. and the continuous variables (Table1). The highest mean score was ( $M = 5.1278$ ) that was recorded for the

**Table 1:** Descriptive statistics for all variables ( $N=71$ )

Variables	N	Minimum	Maximum	Mean	Std. Deviation
OE	71	3.07	5.19	4.0873	.54690
AC	71	4.17	6.17	5.1278	.54690
CC	71	2.83	4.83	3.6944	.54718
NC	71	3.67	6.00	4.9472	.53233

“Affective Organizational Commitment” variable, and the lowest mean score that was recorded ( $M = 3.6944$ ) for “Continuance Organizational Commitment” variable. The mean score recorded for each variable was above 3.5.



## Reliability Statistics

**Table 2:** Reliability coefficients for items in each variable (N=71)

Variables	Cronbach's alpha
Organizational Environment	0.76
Affective Organizational Commitment	0.75
Continuance Organizational Commitment	0.75
Normative Organizational Commitment	0.82

The above Table(2) tells us about the Cronbach's alpha coefficients, which shows a good reliability of the instruments used. Cronbach's alpha coefficient of normative commitment was highest (0.82), and both of the continuance organizational commitment and affective organizational commitment have a low level of Cronbach's alpha coefficients, that is 0.75, the alpha coefficient for organizational environment was recorded as 0.76.

## Correlation Analysis

Pearson's Product Moment Correlation process was used in order to find out the correlation among the variables included in this research study. The values of coefficients which varies from -1 to +1, so where the no. less than zero the relationship is negative between variables while where the no. more than zero, there is a positive relationship between variables. Thus, the co relational analysis show that organizational environment have a significant and positive relation with organizational commitment and all its three aspects i.e., affective, continuance and normative.

		Affective Organizational Commitment	Continuance Organizational Commitment	Normative Organizational Commitment
Organizational Environment	Pearson Correlation	.614(**)	.396(**)	.507(**)
	Sig. (2-tailed)	.000	.000	.000
	N	71	71	71

This table shows that the organizational environment is significantly positively related with Affective Organizational Commitment ( $r = 0.614$ ,  $p < .001$ ), the continuance organizational commitment has a positive and moderate relation with organizational environment ( $r = 0.396$ ). and there is a positive and moderate relationship between organizational and Normative Organizational Commitment ( $r=0.507$ ).

## Findings and Conclusions

The results show that organizational environment is positively related with affective organizational commitment ( $r = .614$ ,  $p < .001$ ). The affective organizational commitment is positively correlated to organizational environment subscales i.e, consideration, intimacy and production emphasis. These findings suggest that faculty's opinion of consideration, intimacy and production emphasis have a contribution to increase the level of affective organizational commitment. As these colleges offers different programs at bachelor level like MBBS, BDS etc and master level like M.Phil in different disciplines and encourages youngsters, less experienced to complete their bachelor, master and doctoral programs. Dean and heads have to encourage and socialize the newly doctoral staff in order to perform their role well in academic culture. The heads are responsible for arranging the mentoring programs in order to make the staff members aware about the academy goals, mission, vision and educational needs of students. The management must arrange some conferences and seminars to teach the faculty and the students about the research programs and other career counseling activities. The management has to arrange such mentoring programs in which the students as well as the teachers are taught with increased emphasis on learning methods, scholarship programs, and career growth. Such programs will be beneficial to the new and fresh faculty and the students.

The results also show that there is a positive relationship between Normative organizational commitment and organizational environment ( $r = .507$ ,  $p < .001$ ). There is a positive relationship between normative commitment and the subscales of Organizational environment i.e. intimacy, consideration, and production emphasis. Similarly, the subscales of organizational environment have the relationships with continuance organizational commitment as all the subcomponents of organizational environment and continuance organizational commitment have a low positive relationship ( $r= .396$ ,  $p < .001$ ).

The results of this research investigation supports the theoretical framework followed by Meyers and Allen's Multidimensional Model (1997) and show that organizational environment and organizational commitment are positively related

to each other. It is concluded that if the subscales of organizational environment i.e; intimacy, consideration, and production emphasis are high; all the subscales of organizational commitment will be high. The results of this study are similar to the results of the research studies studying the same scenario i.e., organizational climate and organizational commitment variables. Allen and Meyer (1990a), Aven (1988), Jackson and Schuler (1985), and Meyer and Allen (1990, 2004) whom results showed that the subscales of organizational commitment take influence from the organizational environment or climate. It was found that if the level of organizational environment is better, the components of organizational commitment are high and good, and if the level of internal organization environment is bad, the level of all the components of organizational commitment will be low.

### **Future Work**

The results from this research study cannot be generalized while this is a replicable research study. The researchers in future are recommended to conduct research in order to evaluate the relationship of organizational environment, culture, and commitment in other levels, and types of colleges, disciplines, and departments.

The scale and model must be revised, modified, and validated to investigate the level of commitment in other educational institutes.

Future researches are recommended to take a consideration of impacts of managerial decision making on organizational environment and organizational commitment level of faculty members.

It is also suggested and recommended that the researchers have to determine the influences of organizational environment and culture on turnover. The relationship of other antecedents with organizational commitment, like performance level, productivity, salary and compensation, and organizational citizenship should be explored in future research studies in Pakistan.

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Journal of  
**Humanities &  
Social Sciences**

JHSS XXIII, No. 3, 2015 (December)

## Effect of ABL Method on Students' Performance in Listening Skill at Grade-VI

Zahoor-ul-Haq<sup>a</sup>, Arif Khan<sup>b</sup>, Rabia Tabassum<sup>a</sup>

<sup>a</sup> Northern University, Nowshera, Khyber Pakhtunkhwa, Pakistan

<sup>b</sup> Department of English & Applied Linguistics, University of Peshawar, Pakistan

### Abstract

Listening is the first and the most important language skill for the acquisition of language. Effective language teaching can enhance this skill. The researchers attempt to investigate the effects of Activity Based Learning (ABL) method on this skill. The researcher used an experimental design (*pre-test, post-test equivalent group design*) for the study. The targets of the study were: (a) to analyze the effects of ABL on listening, and (b) to investigate the effects of ABL method on the achievements of low and high achiever learners in listening skill. To achieve the objectives, null hypotheses were tested. Fifty male students of grade 6 of G.H.S Tarkha, Nowshera were chosen as a sample by using random sampling technique, divided into two equal groups, control and experimental on their achievements in teacher-made pre-test. Low achievers and high achievers were identified in both groups. Two different procedures were applied in the experiment. The experimental group was treated with “*activity based learning method*” whereas the control group learned through the routine teaching method. The experiment was conducted for seven weeks. Two teachers were selected for the study, possessing almost similar competence and qualification of language teaching. After the experiment, a post-test was administered to both groups. To find the effect of ABL, statistical analysis was calculated by independent sample t-test. The findings of the results showed that both groups had almost the same competence in listening skill on pre-test but on post-test results, the experimental group performed better than the control group. It is suggested that teachers should create conducive environment for the improvement of listening. Therefore, they need to provide exposures and practices to students through various activities on the pattern of ABL method.

**Keywords:** Listening skill, Activity Based Learning (ABL), Second language,

## Introduction

Effect of ABL method on the students' performance in listening skill at Grade-VI was a new study in our area for teaching of English as a "foreign language". Language is considered as a tool of communication and social interaction. Being a tool, English language helps to enhance our knowledge and makes us to interact across the world. English language learning has its own beauty, especially the methods of teaching through which it is learnt. It is the mean of transportation in which all subjects travel. Nowadays, learners require proficiency in English Language and communication skills. These communication skills are interwoven in listening, speaking, reading, and writing skills. Globally, English language has importance and it is now a necessity to get command over English language skills to compete with the world. The word 'innovation' is derived from Latin word '*innovare*' means changing something new. Further, it can be assumed that 'innovation' involves the practical accomplishment of new ideas (Banu, 2012).

Language is regarded as the ability or capacity of human beings, which they attain with the use of intricate scheme of interaction. In this case, language is considered to be a clear model for such format. According to Paik (2008) the demand and value of English language has made itself a compulsion for learners and significant to acquire it in the recent scenario because, it is supposed to be a crucial instrument, to stay alive in the international market.

Acquiring or knowledge of a second language is multifaceted for the most learners. Second language achievement and second language learning engage different processes. The former process refers to selecting up a second language through disclosure. The latter process deals with the awareness for a second language (Ellis, 2010). To a certain degree, it is difficult to decide what elements of a language; learner's capability or presentation have been acquired or learned.

It is as clear as day that without specific aims or objectives for any activity the desired results cannot be achieved. Therefore, it is necessary to make learning process more scientific and successful. Further, teachers need to be aware of long term targets and their specific aim of "English language teaching" (James, 2001). The main aim of "English language teaching" at Grade-VI is to develop student's language skill i.e. listening.

The most interesting and important skill of language is "listening", which is regarded as a prerequisite for the enhancement of other language skills. According to the study of Brown and Yule (1999), they argue that Listening is a procedure that entails understanding of a message which is methodical, in a constant sound

stream and after that, conceiving in mind, recognizing elements inside this stream which is new for the listener and this structure is not heard by him/her. It proposes that a deep acquaintance with phonology/sound system of a language is the prerequisite for the improvement of listening skill. Hence, in the normal way of language-learning, so the first step in acquiring a language would be listening and exercises based on this must be watchfully and step-wisely prepared.

Listening and hearing are two terms, which are over and over again puzzled. So, “hearing” can be differentiated from listening on the reason that it is scientific & biological system which is systematically elucidated. On the other hand, listening is considered as a “cognitive neurological activity” that deals with the dispensation of acoustic spur and received through aural system. The study of Barthes (1985) differentiates between (hearings and listening) that former is a physiological happening while the latter is a psychological action. He further explains that listening is considered as a purposeful action of audition since past while in current situation it has contracted the command and almost the role of playing over unidentified places which consists of insensitive varieties. However, the process of hearing happens mainly subconsciously. On the other hand, listener interprets actions through listening in order to comprehend it and creates end results from the sound waves. Therefore, listening has three levels of understanding; first one is alerting, second one is deciphering, and the last one is an understanding of the sound formation and what are the effects of sounds on the listener (Barthes, 1985).

The third stage of listening is “understanding” which means to recognize the verbal effects of one person on the other person. Psychoanalysts’ consider “understanding” very important in the process of psychoanalysis. The study of Barthes also suggests that the psychotherapist must not go to the conclusion directly while listening for the purpose of unbiased communication with his/her patient.

On the other hand, “Listening” and “obeying” are two different things. In general, many children’s parents fuse together these two terms, which are of the view that their children misbehave with them because they don’t listen to them. Hence, a child who gets information/instruction in the form of listening from a speaker, he/she understands it and then decides whether to obey it or simply agree with it information or an instruction, sometimes, the results may not favour the person who speaks (Purdy, Michael & Borisoff, 1997).

The study of Prince (2004) reflected that activity based learning is a method of teaching where the learners are actively involved in the course of knowledge. Further, Harfield et al. (2007) stated that activity based learning is a method in which learners vigorously contribute in the all learning activities while they do not



participate merely as unreceptive spectators. Similarly, Edward (2001) is of the opinion that if these activities which are related to learning on practical experiences of life will support the learners in converting their information into their individual acquaintances and that can be used in many diverse circumstances. The research study of Harfield et al. (2007) depicts that there are two reasons on the basis of which active and conventional approaches are different from one another such as; firstly, on active engagement of the student ;and secondly, on the co-operation among the students.

The study of Sprenger (1999) indicates that the process of activity based learning concentrates on the pupils; the knowledge; they have brought into the classrooms and their lively participation while acquiring language procedure. Genesee (2000) stated that ELLS were not the inactive receiver during the process of learning at the Elementary & Middle level. Relatively, the learners were vigorously building sense and schema (which is also called as structures of language and subject matter). Therefore, it is required that the entire instructions like teaching with direct method ought to be deliberated; consequently, students may take in dynamic roles while learning.

Demirezen (2011) reflects that language is not just the incorporation of acquaintances or knowledge but is to gain lively communicative competence. Therefore, Communicative approach is developed on the basis of this reason in language. It facilitates learners in grasping the application of target language such as to converse aptly, smoothly and efficiently. Further, this approach facilitates learners; to be inventive and participative while teacher centered direction is totally discouraged here. Communicative approach helps in language learning through teacher competence and motivation of the learner, makes the teaching and learning process effective.

Similarly, the hands-on learning is considered extremely, the superior way of teaching. The teaching plans which are comprised of hands-on learning can assist learners and make them more involved in learning (Cabral, 2006). Activity-based learning/ABL depicts a variety of educational approaches to teaching. Its main principle consists of the prerequisite that learning ought to be based on the liability of some “hands-on” experimentation and tasks. The thought of activity based learning is embedded in the general concept that students are vigorous learners rather than inactive receiver of knowledge. If a student is given a chance to investigate by his/her own and endow with a best possible environment of learning, then the learning turns into wonderful and enduring (Anandalakshmy, 2007).

## **Statement of the Problem**

“Effect of ABL method on the students’ performance in listening skill at Grade-VI’ was a new study in our area because it has been observed that till date, language teachers are practicing old methodologies for teaching English. English is a compulsory subject at grade-VI and it is taught as a “second language” in Khyber Pakhtunkhwa Pakistan.

## **Objectives of the Study**

The study was made on the subsequent objectives:

1. To analyse the effects of ABL in listening.
2. To investigate the effects of ABL method on the achievements of low and high achiever learners in listening skill.

To achieve the above objectives null hypotheses were tested.

## **Significance of the Study**

This study will open new doors for effective teaching and learning in classrooms. It will provide support both to learners and teachers for utilizing this approach of teaching. Listening skill can be enhanced through activity based learning as this method provides ample opportunities to student to learn effectively while participating actively in the language learning activities.

## **Delimitation of the Study**

This study was delimited to the Grade-VI male students of public sector schools in Khyber Pakhtunkhwa.

## **Method**

### **Research Design**

An effect of ABL Method on the Students’ Performance in listening skill at Grade-VI was an experimental study. The study design used for this study was Pre-test post-test equivalent group design

## Population

The all students (295,575) of Grade-VI, in Khyber Pakhtunkhwa were the population for this study (EMIS, 2013).

## Sample

A sample of 50 male learners from two sections (A, B) of grade-VI of G.H.S Tarkha, Nowshera was randomly selected for the study. The students were separated evenly on the pre-test achievement scores into experimental and control groups. Experimental and control group had twenty students respectively.

## Research Instrument and procedure

The development of research instrument plays a vital role in any study but in experimental study its importance grows further. Therefore, a teacher-made (Pre-test) and (Post-test) were developed for this study. The pre-test scores was used to distribute sample students into experimental and control groups equally before the start of the experiment, while post-test was given to the sample after the treatment. The main aim of this test was to determine the accomplishment of the sample students. Both pre-test and post-test were the same and were based on ten items. These items were selected from five lessons of Grade-VI English text book, of Khyber Pakhtunkhwa Text Book Board. These lessons were: (a) Ibn-e-Seena; (b) Over Crowding in the Cities; (c) The Wolf Cub; (d) Electricity, and (e) The Qissa Khwani Bazar selected.

The researcher thoroughly studied literatures, books and visited IELTS and TOEFL sites for the development of test items. Further, the test was developed in the consultation with supervisor, supervisory committee and language experts. Some of the test items were changed according to the advice of supervisor and language experts.

The services of two teachers from G.H.S Tarkha, district Nowshera having masters in English from the University of Peshawar were hired for the study. Both of them had relatively equal teaching experience and considerably equal teaching potentials were selected for teaching English to Grade-VI, to the experimental and control groups. The teacher volunteering for teaching experimental group was already trained by the DCTE, KPK in teaching English through activity based learning.

The researcher developed lesson plans from the selected lessons for both the experimental and control groups having the same learning outcomes but control

group was taught through conventional way teaching. For this purpose, activities related to four skills from the text book were developed and opinions of the supervisor as well as language experts were considered. Interesting and relevant activities were selected from British council, E.T.T.E (English for teaching and teaching for English) project such as: introduction, TPR (total physical response), Simon says, Chinese Whispers, name revision ball game, Action song (heads, shoulder.....), inserting missing words, role play, dialogue, etc. were conducted. Teacher also conducted activities mentioned in text book.

4Ps (preparation, presentation, practice and production) format of lesson plan was used for activity based learning method. As English is not the mother tongue in Pakistan, for first two days only warm up activities were conducted in order to motivate them. This created a lot of interest in them and slowly other skills activities were conducted. Daily, only four activities were conducted; duration of the class was forty minutes because in government schools, in Khyber Pakhtunkhwa province, students were not used to with this type of learning.

The treatment was given to experimental group while control group was taught to conventional way of teaching for seven weeks. Regularly, activities of both teachers were observed by the researcher as well as other language experts. Further, opinions of students were also noted.

### **Validity and Reliability**

The content validity of the test was approved by the supervisory committee, i.e. the test items were selected from Grade-VI in the subject of English. Further, the subject and language experts also confirmed the validity of the test.

Reliability of the test was measured by using split-half (odd-even) technique. The test items were divided into halves, ensuring that each half was matched in terms of item difficulty and content. Each half was marked separately. The reliability was calculated by using Spearman-Brown formula:  $\text{Reliability} = \frac{2r}{1+r}$

Where  $r$  = the actual correlation between the halves of the instrument. By using spearman Brown formula, the correlation coefficient is 0.88. In this case formula for reliability was set out thus: The maximum value for coefficient is 1.00. Thus, the reliability of the instrument calculated by split half technique was highly strong.

## Data Analysis

The collected data were fed into the “*statistical package for social sciences*” (SPSS 16 version) program. For this purpose, data analysis was done by applying t-test for independent sample.

## Analysis and Interpretation of Data

The data analysis and its interpretation play a crucial role in research because at this phase the investigator draws results from the obtained data. This section deals with the analysis and interpretation of data. The main target of the study was to analyse development of listening skill through activity based learning at grade six in Khyber Pakhtunkhwa. For this purpose, teacher made pre-test and post-test scores were used for the analysis and interpretation of data obtained.

The significant difference between the mean scores of the experimental and control groups were found on pre-test and post-test by applying t-test. The obtained results along with analysis and interpretation are presented in the following pages.

**Table1:** Significance of difference between the mean scores of the experimental and control groups on pre-test with respect to achievement in listening.

Group	N	Mean	SD	t-value	
				Table value	Calculated value
Experimental	25	7.76	3.23	1.68	0*
Control	25	7.76	3.28		

\*Not Significant d.f=48; Significance level = 0.05

Table 1 depicts that the obtained result of t was 0 and the table value of t was 1.68. Results were tested at 0.05 (level of significance), and the degree of freedom was 48. Hence, the table value of t (1.68) was greater than t (0) obtained value. That's why;  $H_0$  was approved because no significant difference between the mean scores was found. In this way, the experimental and control groups were identical with respect to prior knowledge in the listening skill on pre-test.

**Table 2:** Significance of difference between the mean scores of low achievers of the experimental and control groups on pre-test with respect to achievement in listening

Group	N	Mean	SD	t-value	
				Table value	Calculated value
Low achievers of the experimental group	8	4	1.85	1.74	-1.478*
Low achievers of the control group	11	5.09	1.37		

\*Not Significant d.f = 17; Significance level = 0.05

Table 2 reflects that the attained result of t was -1.478 and the table value of t was 1.74. Results were tested at 0.05 (level of significance), and the degree of freedom was 17. Consequently, the table value of t (1.74) was greater than t (-1.478) obtained value. That's why;  $H_0$  was accepted because no significant difference between the mean scores was found. In this way, the low achievers of the experimental and control groups were identical with respect to prior knowledge in the listening skill on pre-test.

**Table 3:** Significance of difference between the mean scores of high achievers of the experimental and control groups on pre-test with respect to achievement in listening

Group	N	Mean	SD	t-value	
				Table value	Calculated value
High achievers of the experimental group	17	9.5	1.94	1.699	-0.86*
High achievers of the control group	14	10.14	1.99		

\*Not Significant df = 29 Significance level = 0.05

Table 3 depicts that the acquired results of t was -0.86 and the table value of t was 1.699. Results were tested at 0.05 (level of significance) and the degree of

freedom was 29. Hence, the table value of  $t$  (1.699) was greater than  $t$  (-0.86) obtained value. That's why;  $H_{o3}$  was approved because no significant difference between the mean scores was found. Hence, the high achievers of the experimental and control groups were identical with respect to prior knowledge in the listening skill on pre-test.

**Table 4:** Significance of difference between the mean scores of experimental and control groups on post-test with respect to achievement in listening

Group	N	Mean	SD	t-value	
				Table value	Calculated value
Experimental	25	17.52	2.4	1.68	6.716*
Control	25	11.6	3.69		

\* Significant  $df=48$

Significance level = 0.05

Table 4 depicts that the obtained results of  $t$  was 6.716 and the table value of  $t$  was 1.68. Results were tested at 0.05 (level of significance) and the degree of freedom was 48. Hence, the table value of  $t$  (1.68) was less than  $t$  (6.716) obtained value. That's why;  $H_{o4}$  was discarded because significant difference between the mean scores of experimental and control groups were found. In this way, the group who were taught through activity based learning outscored the control group in the listening skill on post-test.

**Table 5:** Significance of difference between the mean scores of low achievers of the experimental and control groups on post-test with respect to achievement in listening

Group	N	Mean	SD	t-value	
				Table value	Calculated value
Low achievers of the experimental group	8	15.25	2.37	1.740	5.29*
Low achievers of the control group	11	9.09	2.58		

\* Significant  $df = 17$

Significance level = 0.05

Table 5 reflects that the obtained result of  $t$  was 5.29 and the table value of  $t$  was 1.740. Results were tested at 0.05 (level of significance) and the degree of freedom was (17). Hence, the table value of  $t$  (1.740) was less than  $t$  (5.29) obtained value. That's why;  $H_05$  was discarded because significant difference between mean scores of experimental and control groups was found. In this way, the low achievers who were taught through activity based learning outscored the low achievers of control group in the listening skill on post-test.

**Table 6:** Significance of difference between the mean scores of high achievers of the experimental and control groups on post-test with respect to achievement in listening

Group	N	Mean	SD	t-value	
				Table value	Calculated value
High achievers of the experimental group	17	18.58	1.54	1.699	5.65*
High achievers of the control group	14	13.57	3.25		

\* Significant d.f =29                      Significance level = 0.05

Table 6 indicates that the obtained result of  $t$  was 5.65 and the table value of  $t$  was 1.699. Results were tested at 0.05 (level of significance) and the degree of freedom was 29. Hence, the table value of  $t$  (1.699) was less than  $t$  (5.65) obtained value. That's why;  $H_06$  was discarded because significant difference between the mean scores of experimental and control groups was found. In this way, the high achievers who were taught through activity based learning outscored the low achievers of control group in the listening skill on post-test.

## Discussion

When the experimental and control groups were analyzed with respect to achievement in listening on pre-test, no significant difference were found between the two groups and both the groups were almost equal with respect to achievement in listening ability at (0.05) level. That's why; the null hypothesis ( $H_01$ ) was approved and both the groups were similar on their prior knowledge.

Similarly, the analysis between the mean of pre-test scores of low achievers of the experimental and control groups with respect to the achievement in listening was



also insignificant at (0.05) level. It proves that the low achievers of both groups were identical in their previous knowledge with respect to achievement in listening. That's why;  $H_0$  was established.

In the same way, the dissimilarity between the mean pre-test scores of high achievers of the experimental and control groups with respect to achievement in listening was also insignificant at (0.05) level. For this reason, the null hypothesis; was established; and together; the groups might be treated as equivalent on pre-test.

The experimental group performed considerably better than control group on post-test with respect to their achievement in listening. The difference between the mean "post-test" scores of both groups was significant at (0.05) level. Therefore, null hypothesis was abandoned. The results of the study confirmed the studies of Harfield et al. (2007) who stated that activity based learning is a method, in which learners are vigorously contributing in the learning activities while they do not participate merely as unreceptive spectators.

Moreover, the comparison between mean "post-test" scores of low achievers of the experimental group and control group on listening was significant at (0.05) level. It suggests that low achievers of the experimental group, who were taught through 'activity based learning', performed considerably better than control group who were taught through traditional method of language teaching. As a result, the null hypothesis was discarded. The results of this study confirmed the views of (Krashen, 2003), who was of opinion that Pupils play pleasurable, attractive and dynamic part during the process of learning practice. That's why; a relaxed environment can help in the improvement of Language and literacy, this encourages morals and rejoices for hard work but it also gives the suitable level of challenge to inspire and connect students.

Similarly, the difference between the mean "post-test" scores of high achievers of both the experimental and control groups on listening was also significant at (0.05) level. That's why; the null hypothesis was rejected, in favor of experimental group. The results of the study confirmed the findings of Hug et al. (2005). They were of the opinion that learners show keen interest in learning if learning tasks are pertinent to learners, individually.

## Conclusion

The following conclusions are made in the light of statistical analysis and the findings of the study.

1. Activity based instruction is more effective for teaching English as a foreign language as compared to traditional/conventional language teaching. Because activity based instruction provides ample opportunities to students for the development of listening skill.
2. The students who were instructed through ABL method outscored control group, as they were taught through traditional language teaching method in listening on post-test. The students of the experimental group found their method of language learning more engaging.
3. The low achievers of experimental group showed a significant jump over the low achievers of control group on post-test in listening because all the students of experimental group practiced interesting activities.
4. The results also proved that high achievers who were taught through ABL teaching method showed better performance in listening than those high achievers who were instructed through conventional/traditional way of language teaching.

## Recommendations

In the light of the conclusions and discussion, the following recommendations are made:

1. It is recommended that activity based teaching method demands competence and training on the part of teacher. It is therefore, recommended that the teachers selected for providing treatment to the experimental group may be thoroughly trained prior to the onset of the experiment.
2. Without an encouraging environment, learning is not possible. It is suggested that teachers should create favorable language environment for the improvement of listening skill. They need to provide exposures and practices to students through various activities.
3. Keeping in view the effectiveness of activity based learning for curriculum developers, the results of this study favors application of this method of teaching. Therefore, it is recommended while designing curriculum, it should be considered that the curriculum be supportive for activity based learning and varieties of activities should be included.
4. Our present examination system only assess reading and writing while ignore other skills such as listening. It is therefore, recommended that examination system should be revisited, to ensure a proper system of evaluation of all four language skills.

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