University of Sindh, Jamshoro

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Ph.D THESIS

Women Participation at Academic & Management Levels in Public Higher Education Institutions of Pakistan: A Case Study of Universities in Sindh

A Thesis Submitted to the University of Sindh, Jamshoro for fulfillment of the requirement of the award of the Degree of Doctor of Philosophy In Economics

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2014

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DEDICATION

This Humble Effort Is Dedicated To

My Parents

MR & MRS KHUSHNOOD ZAHID SHAIKH

My Elder Brother

MUHAMMAD AAMIR

&

My Husband

SYED FURQAN ALI

Their Support and Co-Operation Made It All Possible

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CERTIFICATE

This is to certify that the research work embodied in this thesis entitled "Women Participation at Academic & Management Levels in Public Higher Education Institutions of Pakistan: A Case Study of Universities in Sindh" carried out by Ms. Erum Khushnood Zahid Shaikh under our guidance and supervision is original and is accepted as fulfilling the requirement of the degree of Doctor of Philosophy (PhD) in Economics.

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DECLARATION

I hereby declare that this thesis has been composed by myself and that all the work carried out herein is also my own except where specially stated.

Erum Khushnood Zahid Shaikh

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ACRONYMS AND ABBREVIATIONS

ACCC	Afghan-Canadian Community Center
B. Arch	Bachelor of Architecture
B.CRP	Bachelor of City and Regional Planning
BDS	Bachelor of Dental Surgery
B.E	Bachelor of Engineering
BPS	Basic Pay Scale
C.E	Common Era
CEDAW	Convention of the Elimination of All Forms of Discrimination Against Women
CEO	Chief Executive Officer
CHE	Council on Higher Education
DAIs	Degree Awarding Institutions
D.C.H	Diploma in Child Health
D.C.P	Diploma in Clinical Pathology
DDI	Development Dimensions International
D.G.O	Diploma in Obstetrics and Gynecology
D.M.R.T	Diploma in Medical Radio Therapy
ECFMG	Educational Commission for Foreign Medical Graduates
ENT	Ear Nose Throat
FATA	Federally Administered Tribal Areas
FCPS	Fellowship of College of Physician and Surgeon
FRCS	Fellowship of Royal College of Surgeon
GCU	Government College University
GDP	Gross Domestic Product
GER	Gross Enrollment Rates
HEC	Higher Education Commission
HEIs	Higher Education Institutions
ILO	International Labour Office
ILO	International Labour Organization

ISO	International Organization for Standardization
IUB	Inter University Board
JPMC	Jinnah Postgraduate Medical College
KAUST	King Abdullah University of Science and Technology
LAMEC	Literacy and Mass Education Commission
LUMHS	Liquat University of Medical and Health Sciences
MBBS	Medicine and Bachelor of Surgery
MCPS	Member of College of Physicians & Surgeons
M.D	Doctor of Medicine
MDG	Millennium Declaration and Millennium Development Goals
M.E	Master of Engineering
M.P.H	Master of Physical Health
M.Phil	Master of Philosophy
M.Sc	Master of Science
MUET	Mehran University of Engineering & Technology
NCEE	National Center on Education and the Economy
NER	Net Enrolment Rates
NPA	National Plan of Action
P.G.D	Postgraduate Diploma
PhD	Doctor of Philosophy
P.V.C	Pro-Vice Chancellor
SAP	Social Action Programme
SPDC	Social Policy and Development Centre
TTS	Tenure Track System
UGC	University Grant Commission
UNESCO	United Nations Educational, Scientific and Cultural Organization
UOS	University of Sindh
V.C	Vice-Chancellor
WMO	Women Medical Officers

ABSTRACT

Education gives huge economic and non economic benefits to men as well as to women. The active participation of highly educated women, in any income generating activity, plays an important role to help raising their status in society. In a developing country Pakistan, the share of women population is quite close to that of men. Pakistan can achieve fast and stable economic advancement through proper utilization of educated women. The Government of Pakistan realizes the importance of women education and has taken many positive initiatives. However, the assessment of various education indicators, including literacy rates and net and gross enrolment trends, point out that access to education is still a major problem in Pakistan. The major reasons, being weakened education status that comes from many directions: such as customs/traditions, political instability, insecurity, lawlessness and lack of appropriate government attention. Sindh is the province of Pakistan and the status of women education in this province is not different from other provinces in the country.

Higher Education Institutions (HEIs) can play a significant part to provide better and equitable employment opportunities to women and can help removing the inequality in authority and status among men and women. It has been mentioned that, in the world, female students' ratio has become more, or equal, to male students; but female student's ratio is not encouraging in non-traditional disciplines (i.e. commerce, engineering, finance etc). This trend has also been observed in Higher Education Institutions (HEIs) of Pakistan. Across the world women have improved their relative positions at academic and management cadres in Higher Education Institutions (HEIs) but women representation still remains unequal to that of men.

The Study is focused to find out male-female imbalance in employment, in public higher education sector, moreover, it aims to address and asses all major issues concerned to underutilization of educated women in Higher Education Institutions (HEIs) of Pakistan. The Study is intensive to quantify women's potential and their participation in public higher education sector. It also explores direct and indirect factors impinging women's participation ratio. The research is based on qualitative and quantitative data. For collection of data on parameters, such as education, training, research publications, self-motivation, decision making

roles and management skills etc.), three leading public sector universities in Sindh were selected. Respondents were categorized according to their responsibilities in selected universities. Formal statistical approaches were used to analyze and present the data.

The women faculty representation has increased in Pakistan, but survey data confirmed that women faculty representation ratio have curved down from junior to senior teaching categories. Mehran University of Engineering & Technology (MUET) is a male dominating professional university, therefore, these trends are higher up in this university. Sample women actively participated in professional skills development activities, but due to burden of personal life- roles large proportion of sample women could not energetically participate in research activities particularly at international level and are found with weak research record, thus, stuck at lower teaching position.

Logistic regression model confirmed that qualifications, experience and self-motivation are the significant predictors for predicting women representation, at management cadre, in Higher Education Institutions (HEIs). However, sample women were deficient of these required management qualities, therefore, could not participate equally at management cadre, in universities in Sindh. Healthy work environment encourages women to contribute enthusiastically with their role in Higher Education Institutions (HEIs); but Study results show that sample women are not fully satisfied with available physical facilities and people's attitudes in Higher Education Institutions (HEIs).

On Big Five personality trait model women are found as introverts, closed, extremely agreeable and neurotic personalities (i.e. 36 percent, 12 percent, 38 percent and 28 percent respectively). These women failed to respond on having required management qualities, such as communication initiatives and confidence. In contrast particular proportion of sample women reported as extroverts, open and conscientious personalities (i.e. 57 percent, 76 percent and 87 percent respectively) these women were found with having effective leadership qualities. Logistic and multiple regressions also confirmed that personality traits have significant impact on job performance, which in turn affects their participation at academic and management cadre in Higher Education Institutions (HEIs) of Pakistan.

In the context of Study results it is concluded that due to weakened education status, women do not have much access to better employment positions in higher education sector. In Higher Education Institutions (HEIs) other than, progress in relative positions, women's participation at academic and management cadre remains unequal. Women have skills and abilities to participate, equally, with men; but due to the dual burden of personal/domestic and professional roles have not been able to devote additional time and energy for research and management activities, hence stuck at junior teaching positions and poorly appeared at management cadre. On the flip side, women, due to their personal characteristics, like to do teaching rather than management activities. There is need to upgrade education policy to enhance female enrolment proportions in all disciplines and at all education levels. It is suggested to take positive initiatives, to enhance women's self-motivation towards research and to upgrade work environment. Various programs should be organized for upgrading of women's management potentials, and to develop awareness among them to properly utilize their skills, abilities and available opportunities, to uplift their professional status at national and international levels.

REFERENCES

1. Administrative Units of Pakistan. From Wikipedia the Free Encyclopedia updated: 28 Jun 2012, cited: 3 July 2012. Available at: http://en.wikipedia.org/wiki/Administrative_units_of_Pakistan

2. Age from the Free Dictionary by Farlex. From Google. Cited: 20 Oct 2012. Available at: http://www.thefreedictionary.com/age

3. Ahmed Anis. (1982). Muslim Women & Higher Education: A Case for Separate Institutions & a Work Plan for Women's University. Institute of Policy Studies. Islamabad.

4. Al-Zawahreh Abdelghafour & Al-Madi Faisal (2012). The Utility of Equity Theory in Enhancing Organizational Effectiveness. European Journal of Economics Finance and Administrative Sciences. 46:158-170.

5. Amina H. & Shehla A. (2009). Impact of Office Design on Employees Productivity: A Case study of Banking Organizations of Abbottabad, Pakistan. Journal of Public Affairs. 3(1):1-13.

6. Analytical Skill. From Wikipedia Free Encyclopedia Updated: 19 Mar 2011, Cited: 24 Mar 2011. Available at: http://en.wikipedia.org/wiki/Analytical_skill

7. Anderson D.R, D.J. Sweeny and T.A. Williams. (1993). Statistics for Business and Economics West Publication Company. USA.

8. Annual Status of Education Report. (2013).ASER Pakistan. South Asian Forum for Education Development. Islamabad http://www.aserpakistan.org/document/aser/2013/reports/national/ASER_National_Report_2013.pdf

9. Anwar Mohammad Nadeem. (2005). Evaluative Study of Management Techniques Used in Administrative & Academic Decision Making In Universities. PhD Thesis. University Institute of Education & Research. Rawalpindi.

10. Ashton Michael C. & Lee Kibeom. (2001). A Theoretical Basis for the Major Dimensions of Personality. European Journal of Personality. 15:327- 53.

11. Assié-Lumumba N'Dri T. (2006). Empowerment of Women in Higher Education in Africa: The Role and Mission of Research. UNESCO Forum Occasional Paper Series Paper No. 11. UNESCO. New York. USA.

12. Atta-Ur-Rehman. (2011). Jung News Paper. 25 September 2011. p7.

13. Azra Parveen, Khalid Rashid & Muhammad Zafar. (2011). System and Reforms of Higher Education in Pakistan. International Journal of Business and Social Science. Vol. 2 No. 20. http://ijbssnet.com/journals/Vol_2_No_20_November_2011/28.pdf

14. Baloch F. Z. (2002). Research Methodology. Golden Publications. Hyderabad.

15. Baloch Sanaullah. (2010). Daily Times. Uploaded: 3 March 2010, Cited: 28 March 2010. Available at: http://www.dailytimes.com.pk/default.asp?page=2010%5C03%5C03%5Cstory_3-3-2010_pg3_5

16. Benazir Bhutto From Wikipedia Free Encyclopedia Cited: 22 March 2014.Available at:http://en.wikipedia.org/wiki/Benazir_Bhutto

17. Bengali Kaiser (1999). History of Educational Policy Making and Planning in Pakistan. Working Paper Series # 40. Sustainable Development Policy Institute (SDPI).

18. Bano Masooda (2007). Identification of Programmes for Study in Pakistan: Initial Notes and Methodology International Development Department (IDD).ISBN: 0704425513

19. Barrett, L.F. and Pietromenaco, P.R. (1997). Accuracy of the Five-factor Model in Predicting Perceptions of Daily Social Interactions. Personality and Social Psychology Bulletin. 23(11):1173–87.

20. Bateman, T.S. and Snell, S.A. (1999). Management. 3rd ed. Building Competitive Advantage, McGraw-Hill.

21. Begum Zohra, Khan Iqbal & Iqbal Assad. (2011). Socioeconomic Status of the Girl Students and Their Dropout Rate at Primary Level in F.R. Kohat (FATA- Pakistan). European Journal of Social Sciences. 20(2):356-384.

22. Bell, Sharon. (2009). Women in Science: Maximizing Productivity. Diversity and Innovation. Report Prepared For The Federation of Australian Scientific and Technological Societies (FASTS). Cited: 7 May 2011. Available at: http://scienceandtechnologyaustralia.org.au/wp-content/uploads/2011/06/2009report_wise.pdf

23. Berg Peter, Appelbaum Eileen & Kalleberg Arne L. (1999). The Role of the Work Environment and Job Characteristics in Balance Work and Family. Paper Presented at Economic Policy Institute Symposium on15 June 1999. USA. Cited; 2 Jan 2012. Available at: http://www.dol.gov/oasam/programs/history/herman/reports/futurework/conference/balance/balance.pdf

24. Bernard, H.R. (2002). Research Methods in Anthropology: Qualitative and quantitative Methods. 3rd ed. Altamira Press. California.

25. Birch .D & Kamali .F. (2001). Psychological Stress, Anxiety, Depression, Job Satisfaction and Personality Characteristics in Preregistration House Officers. Postgrad Med J. 77 (904):109–111.

26. Boatman, J. , Wellins R. S. & Neal. S. (2011). Women Work: The Business Benefits of Closing the Gender Gap. Global Leadership Forecast 2011. Development Dimensions International (DDI). United State. Cited: 8 Aug 2012. Available at: http://www.ddiworld.com/DDIWorld/media/trend-research/womenatworkgendergap_br_ddi.pdf

27. Bono.J.E & Judge.T.A. (2004). Personality and Transformational and Transactional Leadership: A Meta-Analysis. Journal of Applied Psychology. 89 (5):901–910.

28. Bovee C. L., Thill, W. and Dovel P. (1993). Management. McGraw- Hill. America.

29. Bryman, A. and Bell, E. (2007). Business Research Methods. 2nd ed. Oxford: Oxford University Press.

30. Canadian Association of University Teachers. (2009). Adopted from Catalyst Women in Academia. Updated: 10 July 2012, Cited: 15 July 2012. Available at: http://www.catalyst.org/knowledge/women-academia

31. Caligiuri, P.M. (2000). The Five Big Personality Characteristics as Predictors of Expatriates: Desire to Terminate the Assignment and Supervisor- rated Performance. Personnel Psychology Journal. 53 (1):67–88.

32. Carlson Neil R. & Buskist William. (1997). Psychology: The Science of Behavior. 5th Ed. Allyn and Bacon a Viacom company. USA.

33. Chauddhury M.Aslam .(2012). Research Methodology. Ed. Publisher Emporium. Lahore.

34. Chaudhry Imran Sharif, Farhana Nosheen & Muhammad Idrees Lodhi. (2012). Women Empowerment in Pakistan with Special Reference to Islamic Viewpoint: An Empirical Study .Pakistan Journal of Social Sciences (PJSS)Vol. 32, No. 1, pp.171-183

35. Chitrakar Roshan. (2009). Overcoming Barriers to Girls' Education In South Asia: Deepening the Analysis. United Nations Children's Fund 2009. Regional Office for South Asia. Kathmandu. Nepal. Cited: 15 July 2012. Available at: http://www.unicef.org/rosa/whole_book_b.pdf

36. Christopher Dougherty, (2011) Introduction to Econometrics**,** 4th edition, Oxford University Press

37. Damodar Gujarati and Dawn Porter (2009) Essentials of Econometrics**,** 4th edition, McGraw-Hill/Irwin.

38. Digman, J.M. (1990). Personality Structure: Emergence of the Five-factor Model. Annual Review of Psychology. 41:417–40.

39. Dupriez Olivier. (2003). Economic & Research Department Policy Brief; Adapting Education to the Global Economy. Asian Development Bank. Philippine. Cited 15 Aug 2011. Available at: http://216.109.65.20/Documents/EDRC/Policy_Briefs/PB022.pdf

40. Eagly Alice H. & Carli Linda L. (2003). The Female Leadership Advantage: An Evaluation of The Evidence. The Leadership Quarterly.14:807– 834.

41. Economic Survey of Pakistan (2004-05). Economic Advisor Wing. Finance Division. Islamabad.

42. Economic Survey of Pakistan (2005-06). Economic Advisor Wing. Finance Division. Islamabad.

43. Economic Survey of Pakistan (2006-07). Economic Advisor Wing. Finance Division. Islamabad.

44. Economic Survey of Pakistan (2008-09). Economic Advisor Wing. Finance Division. Islamabad.

45. Economic Survey of Pakistan (2009-10), Economic Advisor Wing, Finance Division. Islamabad.

.

46. Economic Survey of Pakistan (2010-11). Economic Advisor Wing. Finance Division. Islamabad.

47. Economic Survey of Pakistan (2011-12). Economic Advisor Wing. Finance Division. Islamabad.

48. European Commission (2008). Mapping the Maze: Getting More Women to the Top in Research. European Communities. Belgium. Cited 10 Aug 2010. Available at: http://ec.europa.eu/research/science-society/document_library/pdf_06/mapping-the-maze-getting-more-women-to-the-top-in-research_en.pdf

49. European Commission (2009). She Figures 2009 Statistics and Indicators on Gender Equality in Science. Publications Office of the European Union. Germany. Cited: 5 Feb 2010. Available at: http://ec.europa.eu/research/science-society/document_library/pdf_06/she_figures_2009_en.pdf

50. European Commission (2010). More women in senior positions Key to economic stability and growth. Publications Office of the European Union, Belgium.

51. European Commission Justice (2011). Report on Progress on Equality between Women and Men in 2010; the Gender Balance in Business Leadership. Publication Office European Union. Belgium. Cited: 30 Jan 2013. Available at: http://www.google.com.pk/url?sa=t&rct=j&q=European+Commission+Justice%2C+2011%2C+Report+on+Progress+on+Equality+between+Women+and+Men+in+2010%3B+The+Gender+Balance+in+Business+Leadership&source=web&cd=1&cad=rja&ved=0CDYQFjAA&url=http%3A%2F%2Fec.europa.eu%2Fsocial%2FBlobServlet%3FdocId%3D6562%26langId%3Den&ei=CmEJUcziConE0QWZwoDYDw&usg=AFQjCNGl3iZK_R8EnF5QpVBA6hVqCcgPOg

52. Experience from the Free Dictionary by Farlex. From Google. Cited: 15 Dec 2012. Available at: http://www.thefreedictionary.com/Experience

53. Eysenck H.J & Eysenck M.W. (1985). Personality and Individual Differences: A Natural Science Approach. Plenum Press. New York.

54. Eysenck H.J. (1991). Dimensions of Personality: 16, 5 OR 3?-Criteria for A Taxonomic Paradigm. Person. Indimd. Dt$. 12 (8):773-790.

55. Farida Faisal (2010). Measurement Perceptions of Work Environment among Educated Female Public Servant in Pakistan. Pakistan Economic and Social Review. 48 (1):135-165.

56. Fateh Mohammad (1998). Socio-Economic & Demographic Characters Tics of Illiterate Women with Special Reference to Bhangoria Village Karachi Pakistan. Ph.d Thesis.

57. Federal Bureau of Statistics of Pakistan (2011-12). Pakistan Statistical Year book 2011-12. Islamabad. Pakistan. Cited: 27 Oct 2012. Available at: http://www.statpak.gov.pk/fbs/content/pakistan-statistical-year-book-

58. Federal Ministry for Family Affairs (2010). Women in Executive Positions Barriers and Bridges. Berlin.

59. Fullan Michael (1993). Change Forces: Probing the Depths of Educational Reform. Flamer Press. London.

60. Gabbay Alyssa (2011). In Reality a Man: Sultan Iltutmish, His Daughter, Raziya, and Gender Ambiguity in Thirteenth Century Northern India. Journal of Persianate Studies, 4, 1, 45-63.

61. Glenn D. Israel (2013). Determining Sample Size. University of Florida. Institute of Food and Agricultural Sciences (IFAS).

62. Giacometti Miretta (2002). Women in Italian Universities. Industry and Higher Education. 16 (1):43-48

63. Goal Setting Glossary. Cited 11 July 2012. Available at: http://www.eazigoal.com/what-is-goal-setting.html

64. Goal Setting. From Wikipedia the Free Encyclopedia. Updated: 10 July 2012 Cited: 15 July 2012. Available at: http://en.wikipedia.org/wiki/Goal_setting

65. Goldberg, L. R. (1981). Language and Individual Differences: The Search for Universals in Personality Lexicons. Review of Personality and Social Psychology. 1:141–165.

66. Goldberg, L. R. (1990). An Alternative Description of Personality: The Big-Five Factor Structure. Journal of Personality and Social Psychology. 59:1216-1229.

67. Goldberg, L.R. (1993). The Structure of Phenotypic Personality Traits. American Psychologist. 48(1): 26–34.

68. Grant Thornton International Business Report (2012). Women in Senior Management: Still Not Enough. Grant Thornton International Ltd.Cited,10 Feb 2013. Available at: http://www.gti.org/files/ibr2012%20-%20women%20in%20senior%20management%20master.pdf

69. Gujarati, D.N. (2003). Basic econometrics, 4th ed., Boston, McGraw–Hill

70. Gujarati, Damodar N. (1995): Basic Econometrics, 3. ed., New York, McGraw–Hill

71. Hamid Khan Niazi & John Mace (2006). The Contribution of the Private Sector to Higher Education in Pakistan with Particular Reference to Efficiency and Equity. Bulletin of Education & Research. Vol. 28, No. 2, pp. 17-42 http://pu.edu.pk/images/journal/ier/previous_pdf/2_Hamid%20Niazi_The%20Contribution%20_Formatted.pdf

72. Hasan Anwar & Othman Abdullah. (2012). When It Comes To Leadership, Does Gender Matter?. Kuwait Chapter of Arabian Journal of Business and Management Review. 2 (3):12-20.

73. Hassan Abbas, (2011). Pakistan 2020; A Vision For Building A Better. Asia Society Pakistan 2020 Study Group Report. http://asiasociety.org/files/pdf/as_pakistan%202020_study_group_rpt.pdf

74. Herzberg Frederick (1968). One More Time: How Do You Motivate? Harvard Business Review, January-February, pp.56-57.

75. Higgins Daniel M., Peterson Jordan B., Pihl Robert O. & Lee Alice G. M. (2007). Prefrontal Cognitive Ability, Intelligence, Big Five Personality and The Prediction of Advanced Academic and Workplace Performance. Journal of Personality and Social Psychology. 93 (2):298-319.

76. Higher Education Commission (HEC) Official Website, Our Institutions Updated; 10 July 2012, Cited 15 July 2012. Available at: http://app.hec.gov.pk/UniversityFinal2/RegionUniversity.aspx

77. Higher Education Commission (HEC) of Pakistan Official Website, HEC Recognized Universities and Degree Awarding Institutions. Updated: 19 Oct 2012, Cited: 22 Oct 2012. Available at: http://www.hec.gov.pk/ourinstitutes/pages/default.aspx

78. Higher Education Commission (HEC) of Pakistan Official Website. Statistical Information Unit. Students output. Updated: 22 Oct 2010, Cited: 28 Oct 2010. Available at:
http://www.hec.gov.pk/InsideHEC/Divisions/QALI/Others/Pages/StudentOutput.aspx
http://www.hec.gov.pk/InsideHEC/Divisions/HRD/ApprovedPhDSupervisors/Pages/ListofSupervisor.aspx

79. Higher Education Commission (HEC) of Pakistan Official Website (2014), Updated: 3-3-2014 Cited: 1-6-2014 http://www.hec.gov.pk/InsideHEC/Divisions/QALI/QADivision/Pages/EligibilityCriteria.aspx

80. Hill Catherine, Corbett Christianne & Rose Andresse St. (2010). Why So Few? Women in Science, Technology, Engineering and Mathematics. AAUW. United State. Cited: 11 Nov 2012. Available at: http://www.aauw.org/learn/research/upload/whysofew.pdf

81. Hong Tan Teck & Waheed Amna. (2011). Herzberg's Motivation-Hygiene Theory and Job Satisfaction in the Malaysian Retail Sector: The Mediating Effect of Love of Money. Asian Academy of Management Journal. 16 (1):73–94

82. Huang Tsai-Jung, Chi Shu-Cheng and Lawler John J. (2005). The Relationship between Expatriates' Personality Traits and Their Adjustment to International Assignments. International Journal of Human Resource Management 16 (9):1656–1670

83. Idara-e-Taleem-o-Aagahi (ITA) centre for education and consciousness.(2011). Report on 'Right to Education' in Pakistan A Draft for Discussion. A Collaborative Effort with the Pakistan Coalition for Education (PCE)

84. Iguisi Osarumwense. (2009). Motivation-Related Values across Cultures. African Journal of Business Management. 3 (4):141-150

85. Images from Google Cited: 11 Nov 2012. Available at: http://www.goldsmithibs.com/resources/free/motivation/notes/summary%20-%20motivation.pdf

86. Imran Sharif Chaudhry, Farhana Nosheen & Muhammad Idrees Lodhi (2012). Women Empowerment in Pakistan with Special Reference to Islamic Viewpoint: An Empirical Study Pakistan Journal of Social Sciences (PJSS). Vol. 32, No. 1. Pp.171-183. http://www.bzu.edu.pk/PJSS/Vol32No12012/Final_PJSS-32-1-13.pdf

87. Iqbal Ahmad, Hamdan Said, Altaf Hussain and Sadaf Khan (2014). Barriers to Co-Education In Pakistan And Its Implications On Girls Education: Critical Review Of Literature Sci.Int(Lahore),26(1),339 -345.ISSN 1013-5316 http://www.sci-int.com/pdf/98236320066--339-345---Iqbal-Altaf-SS-MALAYSIA-28-Oct-2013-26-1-14.pdf

88. Iqbal Ahmad, Muhammad Rauf, Aqeela Rashid, Shahfiq Ur Rehman, Muhammad Salam. (2013). Analysis of The Problems Of Primary Education System In Pakistan: Critical Review Of Literature.Volum 4.No 2.Issn.2223

89. Isani U.A.G. & Virk Mohammad Latif. (2003). Higher Education in Pakistan: A Historical and Futuristic Perspective. National Book Foundation. Islamabad.

90. Indira Gandhi From Wikipedia, the Free Encyclopedia http://en.wikipedia.org/wiki/Indira_Gandhi Last Modified on 23 April 2014

91. International Labor Office (ILO). (2004). Breaking Through The Glass Ceiling: Women In Management. Geneva. Cited: 11 Oct 2012. Available at: http://www.ilo.org/dyn/gender/docs/RES/292/f267981337

92. James H. Stock and Mark W. Watson (2010) Introduction to Econometrics, 3rd edition, Addison-Wesley

93. Jeffrey M. Wooldridge (2012). Introductory Econometrics: A Modern Approach, 5th edition, South-Western College Publishers

94. Jenn. Ng. Chirk. (2006). Designing A Questionnaire. Malaysian Family Physician. 1 (1): 32-35

95. Jennifer Rowley, (1996) "Motivation and academic staff in higher education", Quality Assurance in Education, Vol. 4 Iss: 3, pp.11 - 16

96. John N. King(1990) Queen Elizabeth I: Representations of the Virgin Queen. Renaissance Quarterly, Vol. 43, No. 1, pp. 30-74 http://johnss4.wikispaces.com/file/view/Queen+Elizabeth+I+Representations+of+the+Virgin+Queen.pdf

97. Joseph M. Putti. (1987). Management: A Functional Approach. McGraw- Hill. Singapore.

98. Kepuladze Tamila Arnania. (2010). Gender Stereotypes and Gender Feature of Job Motivation: Differences or Similarity?.Problems and Perspectives in Management.8 (2):84-943.

99. Khan Matin A. (2007). Research Methods for Business Organizations and Social Institutions. 2nd Ed. Rahber Publisher. Karachi.

100. Khan Musa Jalalzai. (1992). Introduction to Education. Aqeel Book Center. Lahore.

101. Khan Shahinshah Babar (2010). Problems in Universalization of Primary Education in Pakistan. Pak. J. Commer. Soc. Sci. Vol. 4 (2), 147-155

102. Khan Tayyeb Ali and Jabeen Nasira. (2011). Tenure Track System in Higher Education Institutions of Pakistan: Prospects & Challenges. Educational Research & Reviews. 6 (9):605-621.

103. Likert Scale from Wikipedia Free Encyclopedia. Updated; 22 Oct 2010, Cited: 25 Oct 2010. Available at: http://en.wikipedia.org/wiki/Likert_scale

104. Literacy, From Wikipedia the Free Encyclopedia Updated: 15 Aug 2010, Cited: 20 Aug 2010. Available at: http://en.wikipedia.org/wiki/Literacy

105. Lizárraga María L., Baquedano María T. & Cardelle María Elawar Cardelle. (2007). Factors That Affect Decision Making: Gender and Age Differences. International Journal of Psychology and Psychological Therapy. 7(3):381-391.

106. Loughlin Catherine and Barling Julian. (2001). Young Workers' Work Values, Attitudes and Behaviors. Journal of Occupational and Organizational Psychology. 74:543–558.

107. Luthans Fred. (1992). Organizational Behavior. 6th Ed. McGraw-Hill. Singapore.

108. Liaquat University of Medical & Health Sciences (LUMHS) Official Website (2014). http://www.lumhs.edu.pk/

109. Liaquat University of Medical & Health Sciences (LUMHS) Prospectus. (2013)

110. Lynd Douglas. (2007). The Education System in Pakistan: Assessment of the National Education Census. UNESCO. Islamabad. Pakistan. Cited: 11 Nov 2012. Available at:http://www.teachereducation.net.pk/files/sa4.pdf

111. Manal Qutub (2012). Khadijah Bint Khuwaylid The Best Woman of Mankind (May Allah be pleased with her). The Series of: Men and Women around Muhammad (prayers and peace of Allah be upon him). Ed.1 http://www.justonemessage.com/cfit/resources/Khadijah-Bint-Khuwaylid.pdf

112. Maria Das Graças Silva Foster from Wikipedia, The Free Encyclopedia http://en.wikipedia.org/wiki/Maria_das_Gra%C3%A7as_Silva_Foster Updated: 18 Nov 2013

113. Matthews Gerald, Deary Ian J. & Whiteman Martha C. (2003). Personality Traits. 2nd Ed. Cambridge University Press. UK.

114. McCrae, R. R., & Costa, P. T. (1980). Influence of Extraversion & Neuroticism on Subjective Well-Being: Happy & Unhappy People. Journal of Personality and Social Psychology, 38(4): 668-678.

115. Mehran University of Engineering and Technology, Jamshoro Official Website. (2014) http://www.muet.edu.pk/

116. Mehran University of Engineering and Technology, Jamshoro, Prospectus. (2013)

117. Menard, S. 2002. Applied Logistic Regression Analysis (2nd Ed). Thousand Oaks, CA:Sage Publications. Series: Quantitative Applications in the Social Sciences. No. 106 (1st edn), 1995.

118. Ministry of Education. (2009). Pakistan Education Statistics 2007-08. National Educational Management Information System (NEMIS)-Academy of Educational Planning and Management (AEPAM). Islamabad. Cited: 11 Nov 2012. Available at: http://www.aepam.edu.pk/Files/EducationStatistics/PakistanEducationStatistics2007-08.pdf

119. Ministry of Education, Trainings and Standards in Higher Education Government of Pakistan, (2013). National Plan of Action to Accelerate Education-Related MDGs 2013-16; Achieving Universal Quality Primary Education in Pakistan. http://planipolis.iiep.unesco.org/upload/Pakistan/Pakistan_National_plan_of_action_2013-2016.pdf

120. Ministry of Labour and Manpower Government of Pakistan. (2009). Pakistan Employment Trends for Women (Series No.5). Labour Market Information and Analysis Unit. Islamabad. Cited: 11 Nov 2012. http://www.ge4de.org/Portals/0/Pakistan%20Employment%20Trends2009.pdf

121. Mount, M.K. and Barrick, M.R. (1995). The Big Five Personality Dimensions: Implications for Research and Practice in Human Resources Management. Research in Personnel and Human Resources Management. 13:153–200.

122. Muhammad Khan Ayaz & Samia Yasmeen (2011). Impact of Devolution on Enrolment Rate at Primary School Level in Selected Districts of the Punjab. Journal of Elementary Education
Vol.21, No. 2 pp.35-52

123. Muhammad Saeed Shahid & Mahrosh Iqbal (2011).The Effect of Parental Involvement in School Decision Making on Morale of Elementary School Teachers. Journal of Elementary Education Vol.21, No. 1 pp.1-9

124. Mohammad Jalal-Ud-Din and Khan Munir. (2008). Socio-Economic And Cultural Constraints Of Women In Pakistan With Special Reference To Mardan District, Nwfp Province. Sarhad J. Agric. Vol.24, No.3,

125. Mumtaz Khawar. (2006). Gender and Poverty in Pakistan. Background Paper: 7. Asian Development Bank. Pakistan Resident Mission. Islamabad. Pakistan. Cited: 18 Feb 2011. Available at:
http://www.shirkatgah.org/_uploads/_files/f_18-gender-and-poverty-in-pakistan-adb.pdf

126. Nadya A. Fouad, & Romila Singh (2011). Stemming The Tide: Why Women Leave Engineering. University of Wisconsin-Milwaukee
http://studyofwork.com/files/2011/03/NSF_Women-Full-Report-0314.pdf

127. National Center on Education and the Economy (NCEE). (2006). A Profile of the Indian Education System. Paper Prepared for the New Commission on the Skills of the American Workforce. Cited: 11 Nov 2010. Available at:
http://www.teindia.nic.in/Files/Articles/Indian_Education_Sysytem_By_Karthik_Murlidharan.pdf

128. National Sleep Foundation (2011). How Much Sleep Do We Really Need? Cited: 11 Mar 2012. Available at:
http://www.sleepfoundation.org/article/how-sleep-works/how-much-sleep-do-we-really-need

129. Niazi Muhammad Imran & Khan Atta Ullah (2011). The Impact of Education on Multidimensional Poverty across the regions in Punjab. Journal of Elementary Education. Vol.21, No. 1 pp.77-89

130. Nordic Recognition Information Centers. (2006). Report on the System of Education in Pakistan. Cited: 13 May 2010. Available at: http://norric.org/files/education-systems/Pakistan-2006.pdf

131. O'Connell, A. A. 2005. Logistic Regression Models for Ordinal Response Variables. Thousand Oaks, CA: Sage Publications. Quantitative applications in the social sciences, Volume 146.

132. Organization for Economic Co-operation and Development (OECD) (2013).Education at Galance, OECD Indicators, OECD Publishing. IBSN. 978-92-64-20105-7
http://www.oecd.org/edu/eag2013%20(eng)--FINAL%2020%20June%202013.pdf

133. Onokala P. C. & Onaha F.O. (1998). Women in Academic Positions in the Universities in Nigeria. (Paper Submitted To the Association of African Universities). Cited: 21 Sep 2011. Available at: http://rc.aau.org/files/ONOKALA.pdf

134. Oxford Advanced Learner's Dictionary. (2005). 7th Ed. Oxford University Press. New York.

135. Pakistan Social and Living Standards Measurement Survey (2010-11). Government of Pakistan Statistics Division Federal Bureau of Statistics. Islamabad.

136. Pakistan Education Statistics 2010-11. National Educational Management Information System (NEMIS)-Academy of Educational Planning and Management (AEPAM). Islamabad. Ministry of Education.

137. Pakistan Institute of Legislative Development and Transparency, (2011). Right to Free and Compulsory Education in Pakistan. Enforcement of Article 25-A of The Constitution of Pakistan.

138. Pampel, F. C. 2000. Logistic Regression: A Primer. Sage quantitative applications in the Social Sciences Series #132. Thousand Oaks, CA: Sage Publications.

139. Pervez Hoodbhoy. (2009). Pakistan's Higher Education System: What Went Wrong and How to Fix It. The Pakistan Development Review. 48 : 4 Part II pp. 581–594 http://pide.org.pk/pdr/index.php/pdr/article/viewFile/2643/2610

140. Parveen Saleha (2008). Female Education and National Development: As Viewed By Women Activists and Advocates.3Bulletin of Education & Research June 2008, Vol. 30, No. 1, pp. 33-41

141. Picardie, Justine. (2010).Coco Chanel; the Legend and the Life. NY, HarperCollins, 2010.

142. Kazmi Shabbir H. (2006). Higher Education in Pakistan: Are We Producing Quality. Pakistan & Gulf Economist. 25 (48):11-12

143. Qasmi Marhab. (2009). An Analytical Study of Female Education in Rural Sindh & its Impact on Socio-Economic Environment. The Women- Annual Research Journal.1:82-104

144. Rajendra Kumar C. (2008). Research Methodology. APH Publishing Corporation.

145. Rizwan Ahmed and Syed Iftikhar Ali (2012). Implementing TQM practices in Pakistani Higher Education Institutions. Pak. j. eng. technol. sci.Volume 2, No 1, 2012, 1-26. ISSN: 2222-9930 http://www.iobm.edu.pk/PJETS/V2N1/5.%20TQM%20Implementation.pdf

146. Ruth Canagarajah (2009). Breaking the Glass Ceiling? The Paradox of Female Leadership in Sri Lanka. http://www.personal.psu.edu/cpl2/blogs/powerforce/Canagarajah%20on%20Sri%20Lanka.pdf

147. Saeed Ahmad & Prof. Dr. Muhammad Yousaf (2011). Special Education In Pakistan: In The Perspectives Of Educational Policies And Plans. Academic Research International Volum.1.Issue 2.ISSn.2223

148. Saeed Khawaja Amjad. (2005). Management Text & Cases. Institute of Business Management. Lahore.

149. Sajid Ali. (2006). Why Does Policy Fail? Understanding the Problems Of Policy Implementation in Pakistan: A Neuro-Cognitive Perspective. International Studies in Educational Administration, 34(1).Available at: http://ecommons.aku.edu/pakistan_ied_pdck/10

150. Saudi Ministry of Higher Education, General Department for Planning & Statistics Saudi Arabia. (2010). Women in higher Education: Saudi Initiatives & Achievements. Cited: 11 Nov 2012. Available at: http://www.mohe.gov.sa/ar/Ministry/Deputy-Ministry-for-Planning-and-Information-affairs/The-General-Administration-of-Planning/Documents/women_in_higher_edu.pdf

151. Saunders, M., Lewis, P. and Thornhill, A. (2007). Research Methods for Business Students. 3rd Ed. Dorling Kindersley Pvt. Ltd. India.

152. Schulz, Constance B. (1991). "Eliza Lucas Pinckney" in G. J. Barker-Benfield and Catherine Clinton (eds.) Portraits of American Women from Settlement to the Present. New York: St. Martin's Press, 1991.

153. Shah Saeeda. (1999). Educational Management; Braving Boundaries. National Book Foundation. Islamabad.

154. Shahid Javed Burki. (2008). Industrial Policy: Domestic Challenges, Global Imperatives, and Pakistan's Choices. The Lahore Journal of Economics. Special Edition. pp.23-34

155. Shaid, S. M 2004, Educational Administration, Majeed book Depot, Lahore, pp104-105

156. Shahid Mukhtar, (1995). Mohtarma Fatima Jinnah say Nawaz Sharif Tak, Lahore: Shahid Publishers, n.d.; Saira Hashmi, Aik T'assur do Shakhsiatein (Urdu), Lahore: Al-Faisal Publishers,

157. Siddiqui Saeed Ahmed, 2003, Introduction to Management, Comers Publications, Karachi, pp27-28

158. Singh Jasbir K. S. (1998). Still a Single Sex profession?. Association of Commonwealth Universities (ACU). London.

159. Singh Jasbir K. S. (2002). Women and Management in Higher Education: A Good Practice Handbook. UNESCO. Paris.

160. Social Policy and Development Centre. (2003). Social Development in Pakistan: The State of Education. Annual Review 2002-03. Karachi. Pakistan.

162. Social Policy and Development Centre. (2009). Social Development in Pakistan: Women at Work. Annual Review 2007-08. Karachi. Pakistan.

163. South African Council on Higher Education (CHE) Official Website. (2012). Women in South African Higher Education. Updated: 22 Oct 2011, Cited:25 Oct 2011. Available at: http://www.che.ac.za/heinsa/whe/#wehe

164. State Bank of Pakistan. (2010). Hand Book of Statistics on Pakistan Economy. Cited: 4 Feb 2010. Available at http://www.sbp.org.pk/departments/stats/PakEconomy_HandBook/index.htm

165. Steers. Richard. M, Mowday. Richard. T & Shapiro. Debra L. (2004). Introduction to Special Topic Forum the Future of Work Motivation Theory. Academy of Management Review. 29 (3):379–387

166. Syed Shaukat Ali. (1992). New Management. 2nd Ed. Rehber Publishers. Karachi.

167. Syeda T., Rabia F. & Sabiha I. (2006). Study Guide on Women and Development. Allam Iqbal Open University. Islamabad.

168. Symonds M., Gemmell N., Braisher T., Gorringe K., & Elgar M. (2006). Gender Differences in Publication Output: Towards an Unbiased Metric of Research Performance. ERA journal PLoS ONE. 1(1):1-5.

169. System Analyst Office Government College University Lahore adopted from Government College University, Lahore Official Web Site Cited: 29 Sep 2012. Available at: http://www.gcu.edu.pk/SAOAbout.htm

170. Tariq Rahman (1998). Pakistani Universities: The Colonial Legacy; Research Report Series # 13. Sustainable Development Policy Institute. http://www.sdpi.org/publications/files/R13-Pakistani%20Universities.pdf

171. Tanvir- uz- Zaman, 1998, Study Guide Higher Educatio,Allama Iqbal Open University, Islamabad, p18

172. Thoresen C. J., Bradley J. C., Bliese P. D., and Thoresen J. D. (2004).The Big Five Personality Traits and Individual Job Performance Growth Trajectories in Maintenance and Transitional Job Stages. Journal of Applied Psychology. 89 (5): 835–853.

173. Tower Greg, Plummer J. & Ridgewell B. (2007). A Multidisciplinary Study of Gender-Based Research Productivity in The World's Best Journals. Journal of Diversity Management. 2 (4):23-32.

174. Turner Rebecca A. (2007). Leadership Success: Does Personality Matter?. The California Psychologist Journal. 40 (5) Cited: 8 Jun 2011. Available at: http://rebeccaturnerconsulting.com/pdf/Turner.CP.07.pdf

175. Tytherleigh M. Y.,Webb C., Cooper & Ricketts (2005). Occupational stress in UK higher education institutions: a comparative study of all staff categories. Higher Education Research & Development. Volume 24. Issue 1.DOI:10.1080/0729436052000318569

176. University of Sindh From Wikipedia, the free encyclopedia. (2014) http://en.wikipedia.org/wiki/University_of_Sindh

177. University of Sindh Official Website. (2014). http://www.usindh.edu.pk/

178. UNESCO. (1990). Women Participation in Higher Education: China, Nepal and Philippines. Principle Regional Office for Asia and the Pacific. Bangkok.

179. UNESCO. (1993). Women and Management in Higher Education. Paris.

180. UNESCO. (2006). Pakistan: where and who are the world's illiterates?. Background Paper Prepared for the Education For All Global Monitoring Report 2006 Literacy for Life. Cited: 7 Jan 2011. Available at: http://unesdoc.unesco.org/images/0014/001459/145959e.pdf

181. UNESCO Institute for Statistics. (2010). Global Education Digest 2010: Comparing Education Statistics across the World. Canada.

182. UNESCO. (2010). Why Gender Equality in Basic Education in Pakistan?. UNESCO Islamabad. Pakistan.

183. UNESCO Institute for Statistics. (2011). Global Education Digest 2011: Comparing Education Statistics across the World. Canada.

184. UNESCO. (2012). Education System Profile Pakistan. Cited: 3 March 2012. Available at: http://www.unescobkk.org/education/resources/country-profiles/pakistan/higher-tvet/

185. UNESCO. (2012). World Atlas of Gender Equality in Education. France. Cited: 15 March 2012. Available at: http://www.uis.unesco.org/Education/Documents/unesco-world-atlas-gender-education-2012.pdf

186. United Nations. (2010). The World's Women 2010: Trends & Statistics. United Nations Publication. New York.

187. University from Wikipedia the Free Encyclopedia. Updated: 21 Nov 2011, Cited: 28 Nov 2011.Available at: http://en.wikipedia.org/wiki/University

188. Varma M. M. & Aggarwal R. K. (2009.) Principles of Management. Kings Books. Delhi.

189. Venkatesh V., Morris M. G. & Ackerman P. L. (2000). A Longitudinal Field Investigation of Gender Differences in Individual Technology Adoption Decision-Making Processes. Journal Organizational Behavior and Human Decision Processes. 83 (1):33–60.

190. Verbeek, Marno (2004): A Guide to Modern Econometrics, 2. ed., Chichester: John Wiley & Sons.

191. Wallace T. & Smith H. B. (2011). Core Issues Affecting Women Progressing to Senior Management: A Comparative Overview of The Global South. UNESCO. Paris. Cited: 8 May 2011. Available at: http://doc.iiep.unesco.org/wwwisis/repdoc/SEM313/SEM313_14_eng.pdf

192. Werner, s., & Ones, D. S. (2000). Determinants of perceived pay inequities: the effect of comparison other characteristics and pay system communication. Journal of Applied Social Psychology, 30(6), 1281-1309.

193. Work Environment from Answer.Com from Google. Cited 21 Nov 2011. Available at: http://wiki.answers.com/Q/What_is_the_definition_of_work_environment

194. Work Environment from ISO 9000, 9001& 9004 Plain English Definitions. Cited: 20 Nov 2011. Available at: http://www.praxiom.com/iso-definition.htm#Efficiency

195. World Economic Forum (2011). The Global Gender Gap Report 2011. Geneva. Switzerland. Cited: 10 Jun 2012. Available at: http://www3.weforum.org/docs/WEF_GenderGap_Report_2011.pdf

196. Zaki W. M. (1998). Education Planning. National Book Foundation. Islamabad.

197. Zaidi S. A. (1999). Issues in Pakistan‘s Economy. Oxford University Press. Karachi.

198. Zaidi M. (2011). Poverty in Pakistan. Dawn.com. Uploaded: 17th Oct 2011, Cited: 20 Oct 2011. Available at: http://www.dawn.com/2011/10/17/poverty-in-pakistan.html

199. Zia Batool, Riaz Hussain Qureshi & Abdul Raouf (2010). Higher Education Commission Islamabad. http://www.hec.gov.pk/InsideHEC/Divisions/QALI/QualityAssuranceAgency/Documents/Performance%20Evaluation%20Standards%20for%20HEIs.pdf

Appendix

SURVEY QUESTIONNAIRE

To whom it concerned

Respected Madam/Sir,

Erum Khushnood is Ph.D scholar in Economics, University of Sindh, Jamshoro. Ms. Khushnood is collecting primary and secondary data towards her research work. Your kind cooperation in assisting her to collect pertinent information will help her to complete this research.

I take this opportunity to confirm that confidentiality of information collected from you will be kept as per the sprit of the ethics of research. The information will not be used anywhere else except for the purpose of this research. The topic of her Ph.D research is as under:

"Women Participation at Academic and Management Levels in Public Higher Education Institutions of Pakistan: A Case Study of Universities in Sindh"

Thanking you for your extended assistance and cooperation.

With Best Regards

Yours Sincerely,

Prof. Dr. Pervez Ahmed Pathan
Professor/Supervisor
Sindh Development Studies Centre
University of Sindh, Jamshoro

Code _____

Women Participation at Academic and Management Levels in Public Higher Education Institutions of Pakistan: A Case Study of Universities in Sindh

1. Teaching
2. Non Teaching
3. Both

Part-One: Registration

1.1 Name of University _____

1.2 Respondent Name _____

1.3 Residential Address _____

1.4 Age Group (Tick one age cohort)

Under 30	30-39	40-49	50-59	60 + Years

1.5 Qualifications (Tick one which is the highest you possessed)

Master	M.Phil	Doctorate	Other

1.6 Are You Currently Registered in M.Phil/Ph.D Program?

1. Yes

2. No

1.7 Marital Status (Tick one which indicates Status)

Unmarried	Married	Divorcee /Widow

1.8 Husband/Father/Guardian's Occupation _____

1.9 Respondent's Family Members

Relationship	**Age**	**Education**

1.10 Job Capacity _____

1.11 Have Administrative Responsibility

1. Yes

2. No

1.12 If Yes, Please Specifying Administrative Responsibility_____

1.13 Nature of Job (Tick one which indicates job nature)

Permanent	Visiting	Reappointed

1.14 Assessing Job Experience

Description	**Months/Years of Experience**
Present Job	
Previous Job	

1.15 Previous Job Capacity _____

1.16 Reason of Previous Job Left (Please tick (✔) any option)

1. Promotion
2. Unsatisfactory Salary Amount
3. Unhealthy Working Environment
4. Offer Inflexible Work Arrangements
5. Others _____

1.17 Satisfied with Present Job (Please tick (✔) any option)

1. Yes
2. No

If Yes, Explain Reasons

_____

_____

_____

If No, Explain Reasons

_____

_____

_____

Part-Two: Teaching/Academic

2.1 Faculty _____ 2.2Department_____

2.3 Subject of Specialization_____

2.4 Academic Responsibility (Tick (✔) one which indicates academic responsibilities)

Teacher	Demonstrator	Both

2.5 If You Are Demonstrator, Please Specifying Responsibilities

_____
_____
_____

2.6 If You Are Teacher, Please Specifying Details

Title of Course(s)	**Class Taught**

2.7Contribution to Community, Please Tick (✔) Appropriately

1. Participated in Talk Shows on Electronic Media

2. Communications in Print Media

3. Working with Organization for Social Welfare

4. Involved Individually for Social Welfare

2.8 Visited During Past One Year in Medical Campus

1. Yes

2. No

2.9 If Yes, Please Specify Details.

1. Numbers of Visit _____
2. Numbers of Visit on One/Less than One Week Basis _____
3. Numbers of Visit on One Month Basis_____
4. Numbers of Visit on More Than One Month Basis_____

Specifying Reasons	**Number of Visits**	**Paid by University**	**Voluntary/ Involuntary**	**Paid by Host Organization**
Flood				
Vaccination				
Eye				
Consultation				
Deliveries				

Part-Three: Research Activities

3.1 Research Contributions Till 2010

Description	**National (in Numbers)**	**International (in Numbers)**
Publications		
Attended Workshops		
Participated Conferences		
Papers Presented in Seminars		
Organized Workshops/Conferences/ Seminars		

3.2 Are You Teaching in Research (M.Phil/Ph.D) Course Works?

1. Yes
2. No

3.3 If Yes, Please Specifying Details

Title of Course(s)	**Class Taught**

3.4 Are You Research Supervisor?

1. Yes
2. No

3.5 If Yes, Please Specifying Details

Descriptions	**Numbers**
P.hD Produced Till 2010	
M.Phil Produced Till 2010	
P.hD Students Under Supervision	
M.Phil Students Under Supervision	

For Item Number 3.6 & 3.7, Please Tick (✔) Only One Box for Each Statement

3.6 Received Degree for Research Contribution from Foreign ☐ Yes ☐ No

3.7 Received/Nominated for Academic Awards ☐ Yes ☐ No

3.8 Total Numbers of Received Awards Till 2010 _____

Part-Four: Management Abilities

Please Read The Following Statement & Tick (✔) Any One Option for Item Number 4.1 to 4.3, From The Given Five Options Against Each Statement. The Rating Scale for Level of Agreement Stands for:

1. Strongly Agree
2. Agree
3. Undecided
4. Disagree
5. Strongly Disagree

4.1 Analytical Skills

Statements	**1**	**2**	**3**	**4**	**5**
I think I have strong ability to articulate					
I feel I have great potential to analyze a problem					
I consider all the facts about organization before makes a decision					

4.2 Goal Setting Ability

Statements	**1**	**2**	**3**	**4**	**5**
I feel I have strong ability to plan the future					
I feel I have great potential to develop specific challengeable objectives that can be successfully achieved					

4.3 Personality Traits

Statements	**1**	**2**	**3**	**4**	**5**
I see myself as someone who is reserved					
I see myself as someone who is generally trusting					
I see myself as someone who tends to be lazy					
I see myself as someone who is relaxed, handle stress well					
I see myself as someone who has few artistic interests					
I see myself as someone who is outgoing, sociable					
I see myself as someone who tends to find fault with others					
I see myself as someone who does a thorough job					
I see myself as someone who gets nervous easily					
I see myself as someone who has active imagination					

Part-Five: Environment & Additional Responsibilities

5.1 Who looks after these activities, when you are Out for Job?

Activities	**Monthly Cost per Activity**
1. Children Look After_____	_____
2. House Cleaning _____	_____
3. Cooking _____	_____
4. Other _____	_____

5.2 Time Spent on Following Activities Per Day/Per Week

Description	**Hours**	**Mode**
Leisure in a Day		
Sleep in a Day		
Part Time Job in a Day		
Permanent Job in a Day		
Social Events in a Week		

5.3 Details of Office Facilities at Jobs, Please Tick (✔)

Available Facilities	Part Time Job	Full Time Job
1. Comfortable Room (for rest in between long working hours)	_____	_____
2. Equipments (operational equipments etc)	_____	_____
3. Separate Office with Working Facilities (Computer etc)	_____	_____
4. Transport Facility	_____	_____

5.4 Please Tick (✔) Appropriately

People's Attitudes at Job	Part Time Job	Full Time Job
1. Supportive	_____	_____
2. Co-operative	_____	_____
3. Respectful	_____	_____
4. Reliable	_____	_____
5. Friendly	_____	_____

Note: Item no 5.5 to 5.8 fill by those who have Additional/Part Time Job(s)

5.5 Please Specifying Additional/Part Time Job(s)

S.No	Job Specifications	Timing
1		
2		
3		

5.6 Are You Satisfied with Present Additional/Part Time Job?

1. Yes
3. No

If Yes, Please Explain Reasons

_____

_____

If No, Please Explain Reasons

_____

_____

5.6 **Reason of Doing Additional/Part Time Job** (Please tick (✔) any option)

1. For Additional Money
2. As for Professional Challenge
3. As Hobby
4. Others

5.8 Share of Additional/Part Time Job Earning in Your Total Income.

Less than 50%	50%	More than 50%

Chapter One

Women Education in Pakistan

1.1 Introduction

Universal human right Education is the most pivotal key for development of various productive skills and abilities. Advances in women's education enable them to broadly participate and contribute to their societies and nation's economies. After 64 years of independence women in Pakistan frequently suffer from multiple disparities including education. Government of Pakistan realizes the importance of education and has been committed to provide equal opportunities of education to all without any discrimination. State develops series of efforts at policy level in order to influencing progress in girls' education. Therefore, the chapter enumerates the different education indicators including literacy rates and enrolment trends. The chapter also identifies the factors and socio-economic impediments in the direction of women education in the country.

1.2 Review Literature

The word education refers to a process of teaching and learning (especially in schools, colleges and in universities) to improve knowledge and skills (Organization for Economic Co-operation and Development, 2013). Education gives intellectual, moral and social instruction which may include training or instruction for a particular purpose (Lynd, 2007). Education includes development of character and mental power through systematic instructions (United Nations Educational, Scientific and Cultural Organization, 2012). Education enhances social efficiency, broadens individuals' horizons and enabling them to makes wise decisions (Iqbal. et al., 2013). According to Qasmi (2009), education enhances people's efficiency to work in economic

activities and uplifts their socio-economic status. There are various stages of education (including primary, middle, high secondary and tertiary) however, it is worldwide recognition that, primary and secondary education is not the enough standard to achieve more robust national economic growth indeed, higher education is becomes the forefront need for development of an economy (Isani & Virk, 2003). Highly educated human resource can play more productive role to ensure sustainability of economic growth rate. On other side quality of primary and secondary education have great influence for preparing individuals for the subsequent higher education level and their healthier economic contributions. Poor quality of primary and secondary education put off individuals to become succeed at higher education level and limited their access at better employment positions (Khan and Jabeen, 2011). ***"Primary education is the most important step in a child's educational career. It can make or break the child's educational career" (Pakistan Education Statistics, 2010-11, pp8).*** Higher education institutions (i.e. degree colleges and universities) play an important role to produce critical thinker and technical skilled human capital that can effectively contribute to development of a nation (Pervez, 2009).

The Islamic republic of Pakistan is a developing country associated with unsustainable socio-economic development (United Nations, 2010). The state of Pakistan consists of four provinces (i.e. Punjab, Sindh, Khyber-Pakhtunkhwa and Balochistan), Northern Areas, Federally Administered Tribal Areas (FATA) and Pakistani controlled areas of Jammu and Kashmir (Pakistan Education Statistics, 2010-11). Pakistan is agricultural based country where particular proportion of population belongs to rural areas (Chaudhry et al., 2012). The education system of Pakistan designed to ensure availability of education from basic to higher education level. Structure of education system in Pakistan consists on numbers of stages such as pre-primary, primary, middle, secondary, higher secondary and higher education (Annual Status of Education Report, 2013). At the time of independence, in 1947 Pakistan inherited only two universities that is University of Punjab as full functional university and University of Sindh which affiliated with

Bombay University (Isani & Virk, 2003). By the end of 2012 there were 132 universities/ Degree Awarding Institutions (DAIs) imparting higher education into various regions of the country (HEC Official Website, 2013). In Pakistan education sector in large scale is supposed to be public sector however, on a limited scale private education institutions also imparting education at all levels. Overall there are194151 (i.e. 72 %) public education institutions accommodate 66 percent of total students and 76674 (i.e. 28 %) private education institutions accommodate 34 percent of total students (Pakistan Education Statistics, 2010-11). Majority of private education institutions charged high fee and provide improved quality of education (including better physical facilities). However, greater part of big/well known private education institutions established in urban areas and facilitating to well-off communities of society whereas large part of rural population is poor and highly depends on public education sector.

1.3 Women Education in Pakistan

Female education is the fundamental prerequisite for empowering women in all spheres of society (Chaudhry et al., 2012). Women education enhances women's economic contribution and uplifts their status inside and outside the home (Chitrakar, 2009). Economic Survey of Pakistan (2011) reported that Pakistan becomes 6th most populous country of the world (i.e. 177.10 million) with having 48 percent (i.e.85.51 million) of women population. To develop the weak and unstable economy of Pakistan women also need to work side by side with men in all fields as well as at decent employment positions. This can be achieved through enlarging the proportion of highly educated women, so that they can make their full contribution for socio-economic development of their nation (United Nations, 2010). Education system of Pakistan accommodate female at all levels of education such as female enrolment at primary, middle and higher secondary schools/ inter colleges levels are 7.543 million (i.e. 44 percent), 2.397 million (i.e. 43 percent) and 0.521 million (i.e. 33 percent) respectively (Pakistan Education Statistics, 2010-11).

However, ***"Still almost 44 million Pakistani population in working age (i.e. 15 plus) have not had the opportunity to learn how to read and write, about two third (28 million) of whom are women" (Ministry of Labor and Manpower Government of Pakistan, 2009, pp.18).***

Table- 1.1: Male-Female Population by Level of Education in Pakistan (%)

Education Status	2009-10		2010-11		Rate of Change	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
(a) Literate	69	45	70	45	1	0
No Formal Education	0.5	0.5	1	0.5	0.5	0
Blow Metric	44	29	45	30	1	-1
Metric	13	8	13	8	0	0
Intermediate	6	4	6	4	0	0
Degree & Above	5	3	5	3	0	0
(b) Illiterate	31	55	30	55	-1	0
Total (a+b)	100	100	100	100	_	_

Source: Economic Survey of Pakistan 2011-12, p.34

Table 1.1 shows that gender gap persist at all levels of education in Pakistan furthermore, significant progress is not observed during comparative year (i.e. 2009-10 and 2010-11). Lack of state attention towards education sector and unfavorable socio-economic environment suppose to responsible for unsatisfactory status of female education in Pakistan (Chaudhry et al., 2012). United Nations (2010) reported that in Pakistan more than half of girls leave school before reaching fifth grade. Begum et al., (2011) reported that high dropout rate is the major problem in education sector in Pakistan whereas, due to socio-cultural norms this trend is more prominent among female at school and university level. Private education institutions also accommodate female side by side with male students however, majority of these private institutions are based on co-education system. Annual Status of Education Report (2013) reported that greater parts of rural and tribal communities have conservative believes regarding co-education system, these

families prefer to educate their girls in separate female education institutions therefore, ratio of males in private co-education institutions in rural areas is high (i.e. 70 percent) compare to female (i.e. 30). Qasmi (2009) said that the socio-economic status of women in Pakistan is not equal to men therefore; in several communities women are discriminated in order to seek education and employment.

1.4 Literacy Rate

Literacy rate is defined as the ability to read and write a language whereas, literacy rate of a country refer to particular proportion of population able to read, write, to understand and to speak a language (Chitrakar, 2009).

Table-1.2: Male-Female Literacy Rate by Countries n=11 (%)

Countries	Male	Female
Cuba	100	100
United State	99	99
New Zealand	99	99
Japan	99	99
United Kingdom	99	99
China	97	91
United Arab Emirates	89	91
Indonesia	95	89
Saudi Arabia	90	81
India	75	51
Pakistan	69	40

Source: World Economic Forum 2011, Global Gender Gap Report 2011, p.47

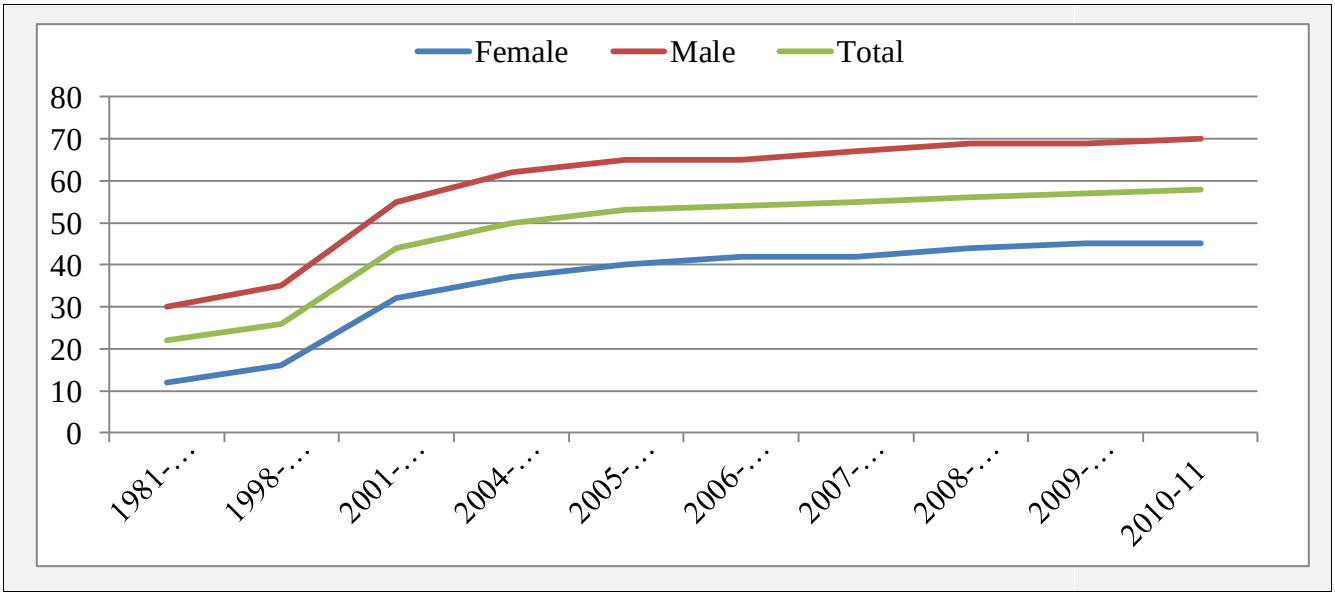
Table 1.2 indicates that Pakistan stand at the lowest literacy levels amongst both genders within selected countries. Comparative data revels that to achieve 100 percent literacy rate is not only a

dream, there are many countries in the world already educate their whole population or at the nearest standard.

1.4.1 Literacy Trends in Pakistan

Adult literacy rate in Pakistan from its existence slowly and gradually has been continuing to improve among both genders however, at slow pace. Figure 1.1 indicates that during last four decades the literacy rate has been progressed from 12 to 45 percent or as less than one percent at per annum. Besides improvement in relative positions, during comparative years from 1981-82 to 2010-2011 gender gaps increased from 18 percent to 25 percent respectively.

Figure-1.1: Male-Female Literacy Trends in Pakistan n=10 (%)



Source: United Nations Educational, Scientific and Cultural Organization (2006), Economic Survey of Pakistan (2004-05), Economic Survey of Pakistan (2008-09) & Economic Survey of Pakistan (2011-12)

United Nations Educational, Scientific and Cultural Organization (2012) reported that socio-economic environment and government ignorance are the major causes for gender disparity in education in Pakistan. According to Begum et al., (2011) poor quality of learning environment,

insufficient numbers of schools is the major obstacles responsible for poor and unequal literacy rate among both genders in Pakistan. Statistical figurers presented in table 1.3 reveal that the literacy rate within both rural-urban areas and between both genders was not significantly improved during mentioned years. Comparatively gender-gap in rural areas is wider than urban areas furthermore, quite lower literacy rates were observed among rural female.

Table-1.3: Male-Female Literacy Rate by Regions n=6 (%)

Year	Rural			Urban		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
2005-06	61	33	47	80	64	72
2006-07	63	32	48	80	66	73
2007-08	65	36	51	81	65	73
2008-09	63	33	48	80	66	74
2009-10	64	34	49	80	66	73
2010-11	65	35	50	81	67	74

Source: Economic Survey of Pakistan (2009-10) & Economic Survey of Pakistan (2011-12)

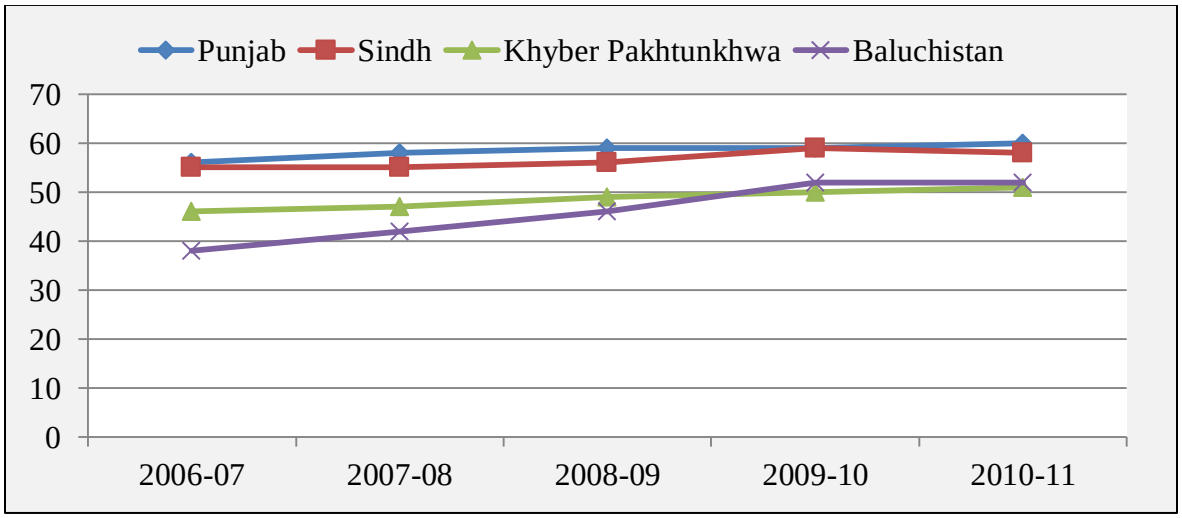
Iqbal et al., (2013) said that in Pakistan especially in rural areas females are highly affected by unfavorable socio-economic environment and discriminated in order to get education therefore, rural female have low access even at basic education.

1.4.2 Provincial Literacy Trends

Disparity in literacy rate is continued to be present in Pakistan at provincial levels. Economic Survey of Pakistan 2011-12 reported that during last decade the overall literacy rate is improved in all provinces of Pakistan. However, substantial disparities are prominent between genders

within all provinces. According to figure 1.2 during mentioned years, Punjab province reported with better literacy trend compare to other provinces (i.e. due to availability of infrastructure and government attention) whereas, Balochistan stand with lowest literacy rate particularly in year 2006-07. Literacy trends shows comparatively rapid literacy improvement in Balochistan (i.e. due to overall awareness about education importance, and certain policy measures which focused on education) however, unsatisfactory literacy rate is still pronounced in all provinces.

Figure-1.2: Literacy Trends by Province n=5 (%)



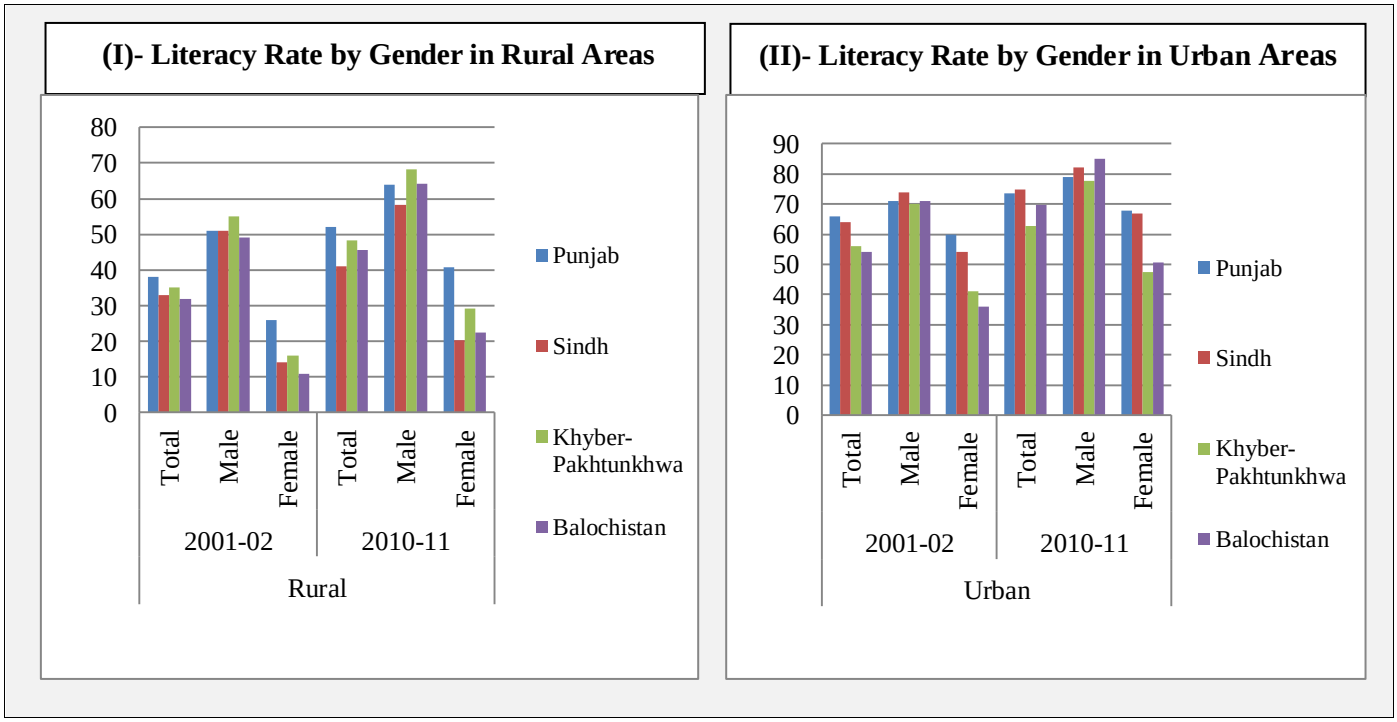
Data Source: Economic Survey of Pakistan 2009-2010 & 2011-12

In Pakistani society there are some communities found with having conservative believes[1] therefore, separate schools for girls suppose to be an important tool for enlarging female literacy. Pakistan Education Statistics (2011) reported that in Punjab province there were 51percent (i.e. 22676) primary schools were only for girls therefore, comparatively better female literacy is observed in Punjab province, Balochistan and Khyber-Pakhtunkhwa reported with 29 percent (i.e. 2876) and 39 percent (i.e. 7745) respectively separate primary schools for girls.

[1]Conservative Beliefs refers to strongly favoring the preservation of established customs, values, etc., and opposing innovation.

According to Annual Status of Education Report (2013) in Balochistan and Khyber-Pakhtunkhwa conservative tribal communities discouraged to educate female child with modern education beside that cultural norms, poor economic condition of families negatively influence children education (i.e. particularly to girls). These factors display sharp gender disparities particularly within Balochistan and Kyber Pakhtunkhwa provinces however, comparatively fast improvement of female literacy rate in Balochistan province is encouraging this indicative that negative perceptions of rural and tribal communities towards female education in Pakistan going to be optimistically change. Figure 1.3 (i.e. I & II) discloses the fact that substantial disparity exist within all province by gender and regions. Although rural females improve their relative positions faster than urban females (except rural females in Balochistan) however, rural female literacy rate remain lower as compare to urban female in all provinces of Pakistan.

Figure-1.3: Provincial Literacy Rate by Regions (%)



Data Source: Economic Survey of Pakistan (2005-06), p.160 & Economic Survey of Pakistan (2011-12), p.133&134

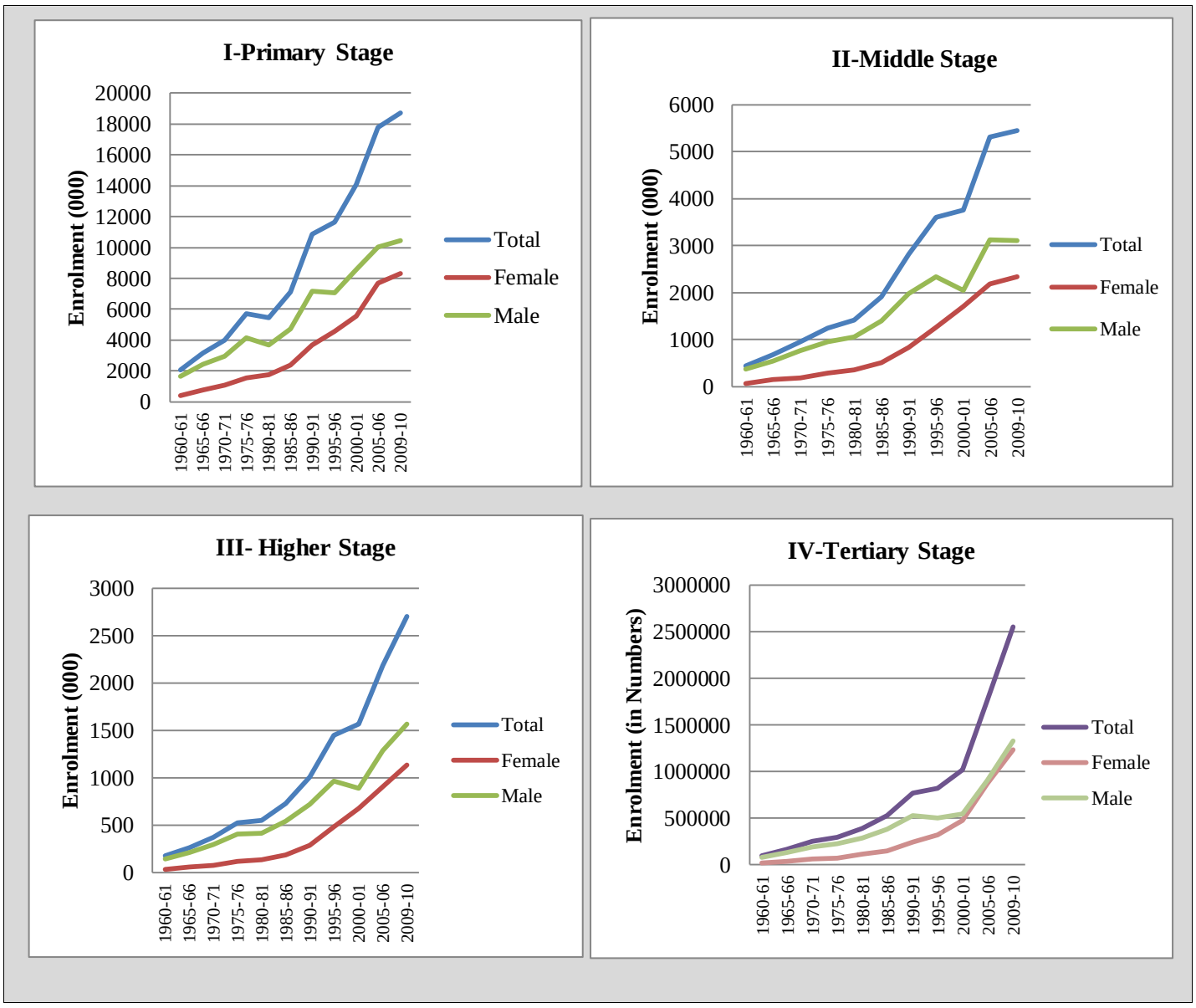
According to United Nations Educational, Scientific and Cultural Organization[2] (2010) geographical accessibility to schools also play important role as to uplift literacy rate but two-third girls in rural Balochistan and over half the female in rural Sindh do not have school facility within one kilometer of their village center. Moreover, those factors which contribute to lower literacy rate (including poverty, quality of teachers, illiterate parent, conservative beliefs etc) are more pronounced in rural areas rather than urban areas therefore, comparatively lower literacy rate is observed in rural areas during both mentioned years.

1.5 Enrolment Trends

Performance of education sector can also be measured by enrolment trends at various education stages in a country. Graphical presentation of enrolment trends in figure 1.5 show that during past decades enrolment at all education stages was increased in Pakistan (i.e. due to high growth in population and government positive initiatives for uplifting education scenario in Pakistan). Figure 1.4 (i.e. I to IV) shows that in year 1960-61 female representation at primary, middle, higher and tertiary stages were 20 percent, 15 percent, 19 percent and 17 percent respectively however, during last 50 years this ratio was gradually increased and reached up to 44 percent, 43 percent, 42 percent and 48 percent respectively. Enrolment at tertiary stage (including enrolment at degree colleges, professional colleges and universities) presented in figure 1.4 (IV) at this stage, narrow gender-gap was observed during last two decades that is result of government attention towards higher education with special focus on female. In year 1990-91 out of 99 there were only 8 professional colleges (i.e. 8 percent) were for female however, in year 2010-11 the number of professional colleges for female was reached at 644 (i.e. 53 percent) (Economic Survey of Pakistan 2011-12).

[2]United Nations Educational, Scientific and Cultural Organization (UNESCO) are an agency of United Nations. UNESCO's aim is "to contribute towards socio-economic development of nations.

Figure-1.4: Male-Female Enrolment Trends at Primary, Middle, High and Tertiary Stage n=11 (Numbers)



Data Source**:** State Bank of Pakistan (2010) & Economic Survey of Pakistan (2011-12)

During mentioned decades (i.e. in figure 1.4) beside improvement in their relative positions in Pakistan there are many girls still deprived to get access at all levels of education and gender gap still persist that favors males. Enrolment in education sector highly co-related with economic scenario of the country while, historically Pakistan's economy shows low growth in Gross

Domestic Product (GDP) [3] and high fiscal deficit therefore, total real education expenditures was not significantly enlarge according to the requirement of education sector in country (Zaidi, 2011). On other side ratio of population below the poverty line was increased (State Bank of Pakistan 2010). Therefore, fluctuated enrolment trends are observed in figure 1.4 (i.e. I to IV) Government of Pakistan made policies and effort to achieve universal primary education and emphasizes on increasing female enrolment however, basic education still not in access to all in the country (Niazi and Khan, 2011).

1.5.1 Gross and Net Enrolment Rates

Net Enrolment Rates (NER) is the participation rate, which is the total number of enrolment of particular official student's aged group who are enrolled in a specific stage of education divided by the total number of population (i.e. in the official age group) who ought to be attending a specific stage of education (Lynd, 2007).

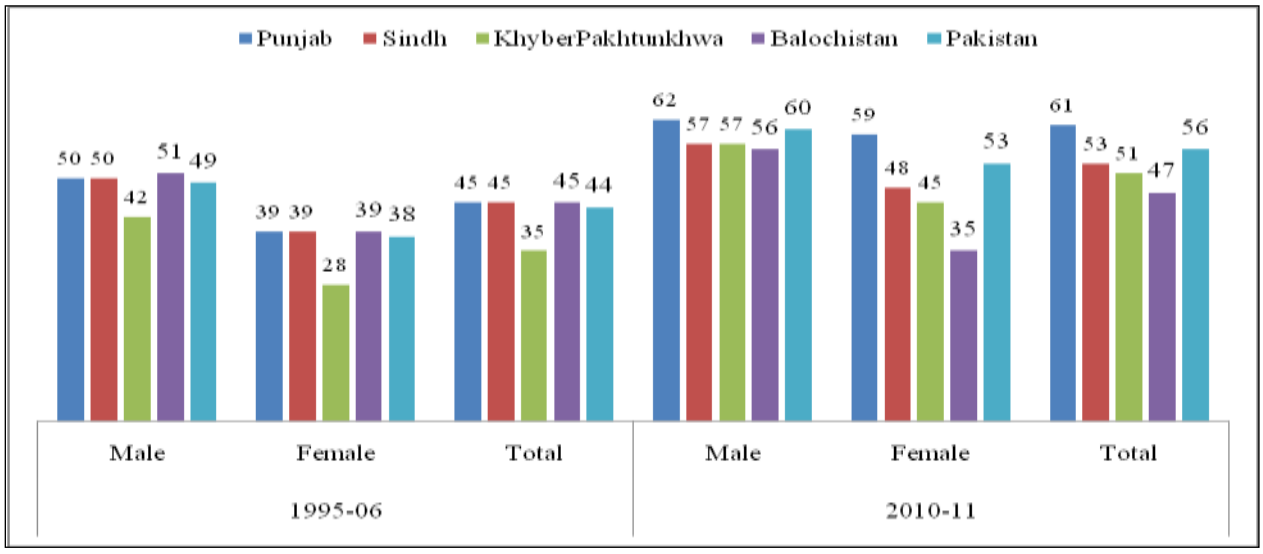
The Gross Enrollment Rates (GER) is the participation rate, which is total number of student's enrolment regardless of age, in a specific stage of education divided by the total number of population (i.e. in the official age group) who ought to be attending a specific stage of education (Economic Survey of Pakistan 2011-02). The education indicators Gross Enrollment Rates (GER) and Net Enrolment Rates (NER) discussed to determine the ratio of students enrolled at Primary, Middle and Metric levels and extend to which females participated into various education stages at national and provincial level.

[3]Gross Domestic Product (GDP) is the money value of all the finished goods and services produced within a country's borders in a specific time period.

1.5.2 Gross and Net Enrolment Rates at Primary Stage

Net primary enrolment rates presented in figure 1.5, data explore unsatisfactory growth in net primary enrolment within both genders in Pakistan during last fifteen years. At provincial level progress in net primary enrolment is observed within both genders (beside females in Balochistan) however; disparities still persist at primary level within all provinces of Pakistan. Comparatively Balochistan province stands at lowest rank in terms of net enrolment rates and over all progress in enrolment rates.

Figure-1.5: Male-Female Net Primary Enrolment in Pakistan by Province (Aged 5 to 9) (%)



Source: Social Policy and Development Center (2009) & Pakistan Social Living Standards Measurement Survey (2010-11).

Table 1.4 indicates that gross enrolment rates at the primary level are much higher than net enrolment rates within all provinces. According to Economic Survey of Pakistan (2011-12), in education sector of Pakistan at primary level the numbers of repeaters students is high and large numbers of overage children also enrolled at primary stage. On other hand numbers of official aged group (i.e. aged 5 to 9) children who remain out from schools also raise (this includes more

girls). This lead to the high gross enrolment rates at the primary stage compares to net enrolment rates at this stage. High number of repeaters and over age children's enrolment at primary stage reduce the opportunities of primary education for those children who are in official aged group (i.e. aged 5 to 9) for this stage. This would hinder Pakistan to be move closer to achieve universal primary education. Table also shows low enrolment rate for female as compare to male child at primary education level.

Table-1.4: Male-Female Gross Primary Enrolment in Pakistan by Province and Region (%)

Country/Province	Urban			Rural			Total		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Punjab	111	108	109	100	88	94	103	93	92
Sindh	107	99	103	87	55	72	94	72	84
Khyber-Pakhtunkhwa	105	96	100	100	73	87	101	76	89
Balochistan	117	84	102	85	43	66	92	52	74
Pakistan	**109**	**103**	**106**	**96**	**75**	**86**	**100**	**83**	**92**

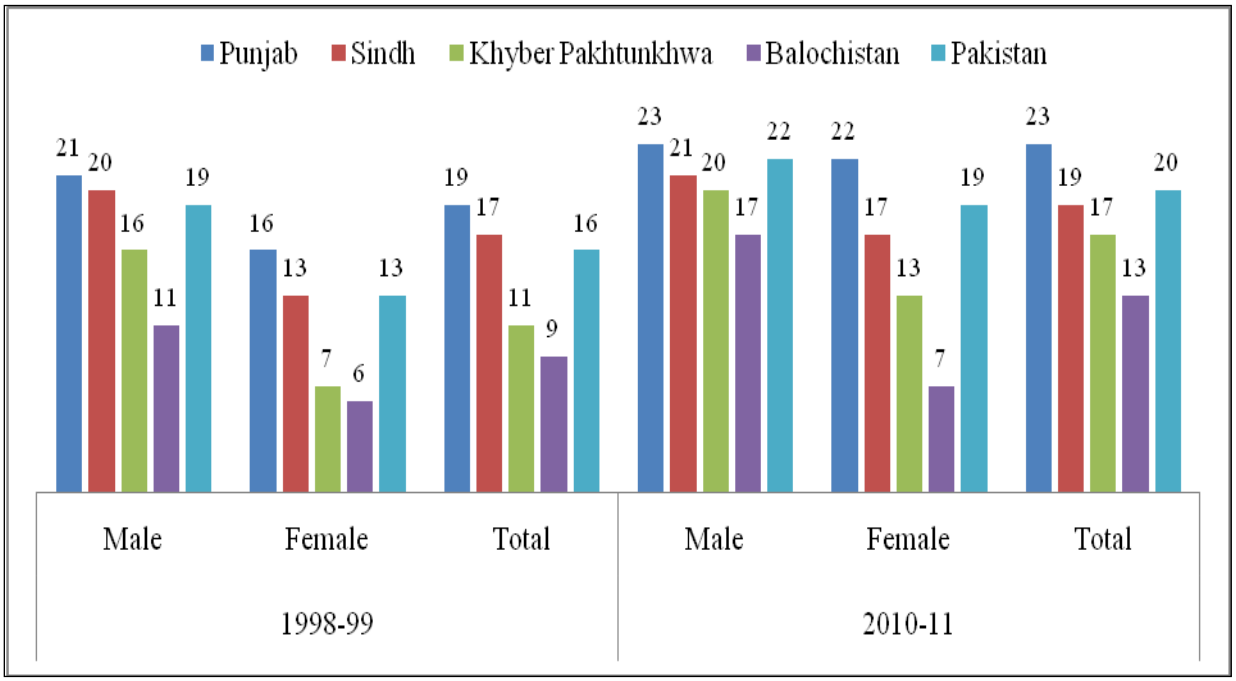
Source: Pakistan Social Living Standards Measurement Survey (2010-11)

Data also highlights that the difference is markedly large in rural areas than in urban areas. Balochistan is the worst for overall gross enrolment rates with lowest female enrolment rates in both rural-urban regions whereas, at the same time province also reported with highest male gross primary enrolment rate with in urban areas. This identifies the extent of negative perceptions towards female education in Balochistan province. Additionally, poor female access to basic education in rural Sindh is unsatisfactory.

1.5.3 Gross and Net Enrolment Rates at Middle Stage

In Pakistan net enrolment rates at the above primary stage always remains much lower than net enrolment rate at the primary stage because many boys and girls discontinued their education after primary stage due to poverty (United Nations Educational, Scientific and Cultural Organization, 2012).

Figure-1.6: Male-Female Net Middle Enrolment in Pakistan by Province (Aged 10 to 12) (%)



Source: Social Policy and Development Center (2009) & Pakistan Social Living Standards Measurement Survey (2010-11)

Figure 1.6 indicates that net middle enrolment trends at national and provincial levels are two times lower than net primary enrolment trends whereas, provincial and gender enrolment trends shows females undermine status at middle stage without significant enrolment growth during last decade within all provinces.

Table 1.5 presents gross middle enrolment trends in urban areas appear to be better than rural areas. Among rural population after the Punjab, Khyber-Pakhtunkhwa reported with better position within both gender [4] at primary and middle education levels. According to Chaudhry et al., (2012) economic and socio-cultural impediments[5] negatively affect female education particularly in rural areas of Pakistan.

Figure 1.5: Male-Female Gross Middle Enrolment in Pakistan by Province and Region (%)

Country/Province	Urban			Rural			Total		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Punjab	70	77	73	57	46	52	61	55	58
Sindh	67	72	69	43	18	32	52	42	48
Khyber Pakhtunkhwa	86	59	73	68	37	54	71	41	57
Balochistan	62	56	60	40	9	27	45	20	35
Pakistan	**70**	**73**	**71**	**55**	**37**	**47**	**59**	**48**	**54**

Source: Pakistan Social Living Standards Measurement Survey (2010-11)

Moreover, in Pakistan almost half (49.3 percent) of the capacity of the entire education system is devoted to primary education, this reduce the recourses of education system for strengthen education system beyond the primary stage (Iqbal. et al., 2013). Therefore, lowest enrolment trends within both genders observed in rural areas particularly in Sindh and Balochistan provinces.

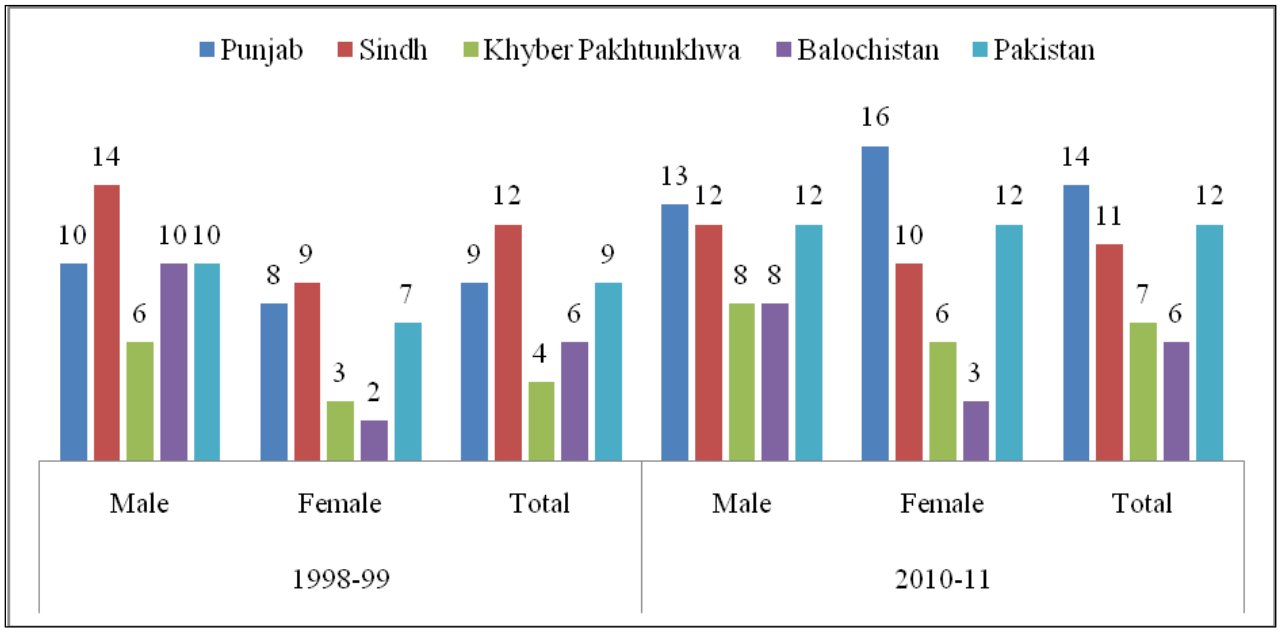
[4]Gender is refers to the fact of being male or female.

[5]A set of beliefs, customs, practices and behavior that create barriers.

1.5.4 Gross and Net Enrolment Rates at Metric Stage

Graphical data presentation in figure 1.7 shows that the net metric enrolment rate in Pakistan in total and among both gender is very low (i.e. only 12 percent). Furthermore, during last decade growth in net enrolment at metric stage was incredibly small (i.e. only 3 percent). Balochistan province again stands at lowest position regarding net metric enrolment rates during last decade without any progress.

Figure-1.7: Male-Female Net Metric Enrolment in Pakistan by Province (Aged 13 to 14) (%)



Source: Social Policy and Development Center (2009) & Pakistan Social Living Standards Measurement Survey (2010-11)

Furthermore, descending trends for males were observed particularly in Sindh and Balochistan. Because of poor economic conditions of families, children leave their studies and start to earn (Khan, 2010). Government of Punjab took serious initiative as to improve the overall scenario of education in this province therefore, the performance of Punjab province during last 12 years

regarding progress in net metric enrolment rates for females is better than other provinces (Niazi and Khan, 2011). However, gender gap still pronounced within all provinces.

Table-1.6: Male-Female Gross Metric Enrolment in Pakistan by Province and Region (%)

Country/Province	Urban			Rural			Total		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Punjab	80	82	81	59	44	52	65	56	61
Sindh	84	75	79	46	15	32	63	45	55
Khyber Pakhtunkhwa	76	58	67	69	32	51	70	36	54
Balochistan	72	52	64	46	5	29	52	17	38
Pakistan	80	77	79	57	35	47	65	49	57

Source: Pakistan Social Living Standards Measurement Survey (2010-11)

Gross Metric Enrolment Rates presented in table 1.6, data indicative that the gender and regional discrimination is persist at national and provincial level in Pakistan. Furthermore, poor share at metric stage of rural females indicative that rural female remain more deprive to get their basic universal human right[6] (i.e. education) particularly in Sindh and Balochistan provinces.

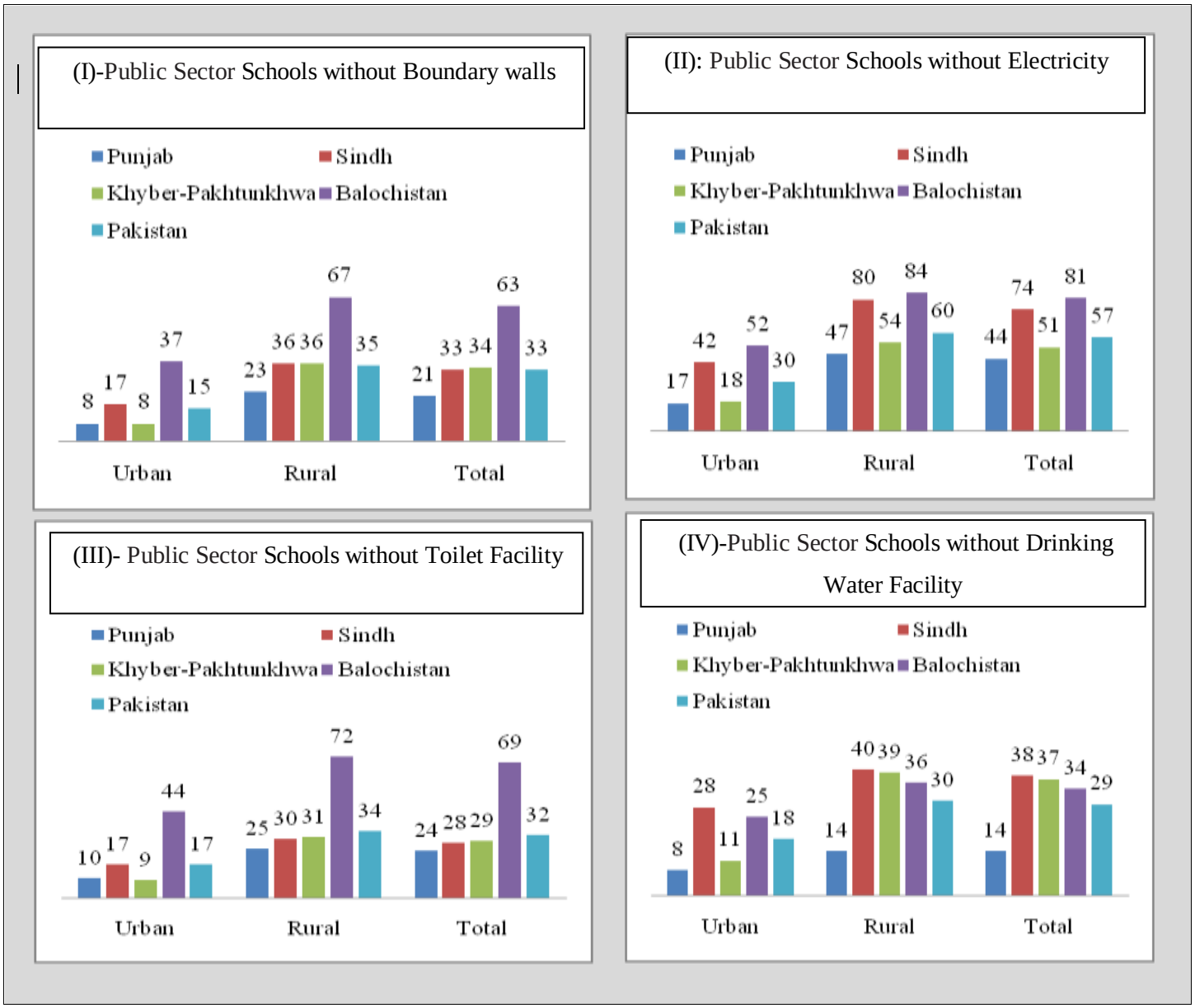
1.6 Physical Infrastructure

Quality of education is highly associated with existing learning environment in educational institutions (Organization for Economic Co-operation and Development, 2013).

[6]Universal Human Rights are the fundamental rights for all peoples and all nations that humans have by the fact of being human.

Figure 1.8 highlights differences in availability of physical facilities in schools among provinces and rural-urban regions. Missing physical facilities in public schools is an important factor that negatively contributes for education disparity in Pakistan among regions, gender and provinces (Annual Status of Education Report, 2013). Females are sensitive by nature therefore, highly affected by poor learning environment (Mohammad and Khan, 2008).

Figure-1.8: Missing Basic Infrastructure Facilities in Public Primary to Higher Secondary Education Institutions of Pakistan (%)



Source: Pakistan Education Statistics (2011)

Country's rural population highly depends on public education sector but regional and provincial analysis shows that poor infrastructures of public schools are most prominent in rural areas within all provinces. In term of existing poor learning environment, Sindh Province stands at second after Balochistan. Punjab province reported as in better position as to provide education with existing learning environment because of that comparatively favorable education scenario was found in Punjab among both gender (i.e. previously discussed in literacy rates and enrolment indicators). In some pockets of rural Sindh, Balochistan and Khyber-Pakhtunkhwa landlords and tribal conservative communities[7] strictly prohibited education and discourage the development of education in their areas, this in turn result of lower enrolment and poor physical maintenance of public education schools (Khan, 2010).

1.7 Separate Education Institutions for Females

The establishment of more education institutions reduces the transportation costs, travel time and distance of the house from the school (Khan, 2010). As well as separate education institutions exclusively for girls at all education stages can play important role as to uplift female education status in the Pakistan. According to Qasmi (2009) due to traditional and religious believes some communities of Pakistani society prefer to educate their daughters/sisters in female education institutions by female teachers. Table 1.7 indicates that over past three decades proportion of separate female education institutions at all education stages has been improved as to enhance the female enrolment in Pakistan at all education stages.

[7]Tribal Conservative Communities refers to social division of a people who share a common ancestry and culture and strongly favoring the preservation of established customs, values, etc., and opposing innovation.

Table-1.7: Separate Education Institutions for Male and Female in Pakistan n=3 (%)

Stages	Male-Female	1990-91	2000-01	2010-11
Primary	Male	73	63	61
	Female	27	37	39
	Total	**100**	**100**	**100**
Middle	Male	61	53	53
	Female	39	47	47
	Total	**100**	**100**	**100**
High	Male	74	69	57
	Female	26	31	43
	Total	**100**	**100**	**100**
Tertiary	Male	69	60	47
	Female	31	40	53
	Total	**100**	**100**	**100**

Source: Economic Survey of Pakistan (2006-07) p.174 & Economic Survey of Pakistan (2011-12) p.150

- Tertiary stage includes arts-sciences colleges, professional colleges and universities

In Pakistani society conservative believes more frequently found in rural communities (Iqbal. et al., 2013). Therefore, in Pakistan the proportion of separate schools and colleges for girls are higher in rural areas than urban areas. Pakistan Education Statistics, 2010-11 reported that out of total 85 percent female schools and colleges belongs to rural areas. This indicates that Government of Pakistan makes serious efforts to increase the accessible particularly for those females who are not able to get education because of co-education system.

1.8 Female Teachers

In Pakistani traditional society the role of female teachers gain more importance and widely acknowledge (Muhammad & Mahrosh, 2011). Particularly in rural areas parents strongly prefer to educate their daughter by female teachers (Iqbal. et al., 2013). Therefore, Government of

Pakistan at policy level took steps to attract female population towards teaching profession in result significant growth within female teaching staff has been observed during last four decades as presented in table 1.8.

Table-1.8: Male-Female Teaching Staff at Various Education Stages in Pakistan n=4 (%)

Stage	Gender	1980-81	1990-91	2000-01	2010-11
Primary	Male	68	67	55	54
	Female	32	33	45	46
	Total	**100**	**100**	**100**	**100**
Middle	Male	71	62	39	35
	Female	29	38	61	65
	Total	**100**	**100**	**100**	**100**
High	Male	70	71	52	48
	Female	30	29	48	52
	Total	**100**	**100**	**100**	**100**
Tertiary	Male	77	71	58	54
	Female	23	29	42	46
	Total	**100**	**100**	**100**	**100**

Source: State Bank of Pakistan (2010-11) and Economic Survey of Pakistan (2011-12)

Government not only appoints teachers, also provides professional training to them in order to upgrade their teaching skills (Hamid, 2011). Besides all these government efforts it is also fact that unprofessional teachers' attitudes with students and teaching staff frequently absentness from public schools is the major factors contribute to students dissatisfaction with attitude and ability of the teachers in public schooling (Annual Status of Education Report, 2013). Therefore parent's confidence on public schools has been decreased and they are more attracting towards private schooling.

It is concluded that education play vital role to establish civilized, peaceful and productive society. Education is essential for human resource development of a nation. The development of underdeveloped and developing countries[8] depends on highly educated human resource and their appropriate utilization. Strong quality of basic education enables individuals to become successive at higher education level and broadly take part in economic progress of a nation. Higher Education Institutions (HEIs) play important role to generate effective and efficient human resource. Pakistan is developing country of the world inherited inadequate education arrangements. Government of Pakistan realized the significance of education and attempted for qualitative and quantitative enlargement of its education system. In Pakistan private and public education institutions at all levels imparting education all over the country however, the well known and better quality giving private institutions established in urban areas. These profit oriented education institution facilitating to well-off communities of society (i.e. due to high cost of education). In contrast, poor section of Pakistani society depends on public or low worth private institutions.

Advances in women's education enable them to broadly participate and contribute to their societies and nation's economies. In 21 century where many nations already achieved 100 percent literacy rate and successfully competing in global economy. In Pakistan literacy rate remain far from being satisfactory (i.e. 28 million of Pakistani women remain illiterate). In Pakistan substantial disparity in literacy rate exists among provinces, rural-urban regions and gender that favor males. The trends of gross and net enrolment rates at various education stages present education sector performance in Pakistan over past decades. Enrolment trends shows gender disparity (i.e. favors males) at all levels of education among provinces and rural-urban regions in Pakistan.

[8]Developing countries are categorized as poor and in these countries citizens are mostly agricultural workers but they wants to become more advanced socially and economically.

Although over past decades girls' enrolment has been increased at all education stages but at the same time high proportion of female population still out from schools, colleges and universities. This indicates that Pakistan has made insufficient progress to eliminate the gender gap in education. Pakistan society is highly divided into rural-urban categories, more than half population belongs to rural areas but equal access to education in rural areas is more depressing. Large proportion of rural population particularly females seldom have equal access to get education. Gender disparity that favors males is more prominent in rural Sindh and Balochistan. However, in urban/developed areas and in well of families situation is much better, females are getting education side by side with males up to higher level and parents are paying high cost to give quality of education to their children without any discrimination by gender. Government of Pakistan gives more priority to rural areas with special focus to girl's education but poor physical facilities in public schools and unqualified and unprofessional attitudes of female teaching staff discourage the large proportion of rural girls to regularly attend schools and finally become dropout from institutions. Beside that there are various other structured and unstructured factors (i.e. traditionally conservative attitudes, parents' educational background, poverty, lack of proper cheek and balance on educational institutions etc) contribute to disparities in education within state. Comparatively large impact of these factors is observed in rural regions of all provinces.

Over past decades the overall situation in relation to female education in Pakistan is gradually get better but still need to improve more and faster because restricted access to education makes poor participation of Pakistani women at decent/high profile jobs. Social Policy and Development Centre (2009) reported that in Pakistan overall female labor force participation is only 25 percent out of which only 3 percent participated at senior managers, senior officials and legislators' positions because half of the total human resource (i.e. women population) in Pakistan is not properly educated this unable Pakistani women to largely and efficiently take part in their societies and nation's economies.

1.9 Public Sector Initiatives

Pakistan inherited British education system at the time of independence in August 1947 (Isani & Virk, 2003). In December 1947 National Educational Conference was organized for determination of future education policy for newly born state (Bengali, 1999). Quaid-e-Azam Muhammad Ali Jinnah, the founder of Pakistan provided basic principles and guidelines for the education system in country. Later on, Government of Pakistan took various initiatives to achieve long-term sustainable educational growth in the country. The brief review of major education policies, plans, programmes and schemes with reference to women education in Pakistan discussed below.

1.9.1 State Constitution

Constitution of Pakistan 1973 first time presents more clearly and refines terms of importance and provision of education (Saeed & Muhammad, 2011). According to this constitution country is commitment to providing education to all their citizens without any discrimination.

- Consistent Article 37 stated that the state shall remove illiteracy and provides free and compulsory secondary education within the minimum possible period. Makes technical and professional education generally available and higher education equally accessible to all on merit (Pakistan Institute of Legislative Development and Transparency, 2011).
- According to Constitutional Amendment No 18, free and compulsory education for the children aged 5 to 16 years has been declared a fundamental right (Pakistan Institute of Legislative Development and Transparency, 2011).
- Article 25-A of the Constitutions stated that the state shall provide free and compulsory education to all children of the age of five to sixteen years in such manner as may be determined by the law (Idara-e-Taleem-o-Aagahi, 2011).

According to United Nations Educational, Scientific and Cultural Organization (2010), at international level Pakistan also committed to provide equal access to education for both men and women into various international forums such as in Universal Declaration of Human Rights (1948), Convention of the Elimination of All Forms of Discrimination Against Women (CEDAW), Beijing Declaration and Platform for Action (1995), World Declaration on Education For All (2000), Dakar Framework for Action, Education for All: 2000 and The Millennium Declaration and Millennium Development Goals (MDGs).

1.9.2 Five Years Plans (1955 to 1998)

Government of Pakistan has planned its economy including education sector for forty (40) years through eight optimistic five year plans. The mechanism of five years plans attempt to make education system according to the socio-economical, national and ideological needs of an independent sovereign state Pakistan (Awan, 2005). Table 1.9 highlights key aspects of educational aims and objectives of Pakistan within the framework of past five year development plans, which deals with development of education, especially in relation to female education. Key aspects shows that every new five year plan revised previous key focus this indicate improper plans implementation. The First Five Year Plan (1955-60) formulates specific recommendation to open primary schools especially for girls and providing scholarship to them however; no significant improvement in the quality of education was made (Saeed & Muhammad, 2011). Overall this plan was not succeeded in getting the desired results in education development, mainly due to lack of financial resource and political instability which led to a neglect of proper implementation of plan. Second Five Year Plan (1960-65) recognized the importance of education as a fundamental building block for the socio-economic development of the country and encourages research, science and technology. Comprehensive merit scholarship system and free primary education was introduced and significant improvement at enrolment level (i.e. 430000 additional male and female children were enrolled)

was observed (Zaidi, 1999). Overall Plan made considerable progress in education sector development but female education was remained far from desired progress (Bengali, 1999).

Table-1.9: Key Aspects of Five Year Plans in Pakistan with Women Education Focus

Plans and Policies	Years	Key Aspects	Women Education Focus
First Five Year Plan	1955-60	Universal Primary Education, Improved infrastructure & enrolment at all levels, Quality of education, Manpower development in higher education	To establish separate primary schools & scholarships for girl's students.
Second Five Year Plan	1960-65	Improved infrastructure and enrolment at all levels, Scholarship for talented students, Free education at primary stage	Improved female enrolment ratio at all levels, Enlarging physical facilities for girl's students
Third Five Year Plan	1965-70	Improved infrastructure and enrolment at all levels with particular focus on primary education, Balanced & integrated education development, Enlarge crops of teachers, To encourage research, science and technology	Improved female enrolment ratio at all levels.
Fourth Five Year Plan	1970-75	Improved infrastructure and enrolment at all levels, To develop more functioning education system, Literacy rate, To remove rural-urban education disparity, To strengthen research, development planning & agriculture education	Improve female literacy rate, Remove gender discrimination by region at all education stages
Fifth Five Year Plan	1977-83	Improved infrastructure and enrolment at all levels, To achieve universal primary education, remove education disparity among social classes and rural-urban areas, qualitative improvement in higher and professional education	Improve female literacy rate, Remove gender discrimination by social classes and regions at all education stages, To expand girl's enrolment at secondary stage
Sixth Five Year Plan	1983-88	Universal Primary Education, improved infrastructure and enrolment at all levels, Introduce Literacy Programme, To improve teachers qualifications, To encourage private education sector	To increase girl's enrolment at all levels with particular focus on primary stage, Literacy program for females
Seventh Five Year Plan	1988-92	Universalize to primary education, literacy rate, quality of education at all levels, Improved infrastructure and enrolment at all levels	To achieve universal primary/basic education for girls, Integrated development of female education through Social Action Programme (SAP), Provision of technical training facilities for women
Eighth Five Year Plan	1993-98	Borden the education resource through private sector investment, To increase infrastructure and enrolment at all levels, Availability of primary schools at reachable distance, Improvement in curricula, text-books & examination system, To improve literacy rate	To achieve universal primary/basic education for girls, Free text books for girl's in class one, To increase girls enrolment at secondary level

Source: Isani & Virk (2003), Zaidi (1999), Social Policy Development Centre Annual Review (2003) & Pakistan Institute of Legislative Development and Transparency (2011).

- Throughout history Government of Pakistan made only eight five years plans (Isani & Virk, 2003).

The Third Five Year Plan (1965-70) was more focused on the development of primary education including girls but at the initial stage of plan implementation because of war with India over Kashmir in year 1965, priority of education was put at behind and more resources were diverted to defense (Sajid, 2006). The Fourth Five Year Plan (1970-75) was designed in

broad frame work as to upgrade the more functioning education system with particular focus on future needs of developing economy. Plan gives priority to reduce regional and gender discrimination for upgrading literacy rate. At the initial stage East Pakistan becomes an independent state as Bangladesh, on the other side the government of Zulfikar Ali Bhutt, give priority to annual development plans, because of that fourth five year plan were largely ignored (Bengali, 1999). However, plan made some progress and numbers of primary and middle schools was increased. In comparative years 1970-71 and 1975-76 total numbers of primary and middle schools particularly for girls were increased by 24 percent and 29 Percent respectively (State Bank of Pakistan, 2010). The Fifth Five-Year Plan (1978-83) was another effort to stabilize the economy and to improve the education sector. Burden of refugees to Pakistan (i.e. after the Soviet invasion of Afghanistan in December 1979), increased defense expenditures and sharp increased international oil prices (i.e. in year 1979-80) drew resources away from planned investments (Isani & Virk, 2003). The Plan was gives disappointing results with particular focus to female education; due to inadequate funding, those programs which were developed for giving educational benefits to women mostly were subjected to the drastic cuts and female literacy rate was remain only 16% in year 1983 (Social Policy and Development Centre, 2003). The Sixth Five Year Plan (1983-88) spending on education was Rs. 19.85 million was not sufficient to achieve the target of all 5 year old girls enrolled (Saeed & Muhammad, 2011). Although, plan's targets achievement were lower than desired level but progress in education sector was considerable. In order to upgrade rural education among both genders Prime Minister's five point programme was launched in 1986 (Bengali, 1999). Additionally, to provide basic education facilities the concept of spatial planning was introduce for both male-female child in backward areas (Zaidi, 1999). Seventh Five Year Plan (1988-92) addresses the women issues and acknowledges their contribution in economic development. Plan stresses the need of uplifting women's socio-economic status in the country and emphasis on primary education and technical training facilities to them. To attract female population towards teaching and for providing

financial benefits to teaching staff, pay scale of school teaching staff was upgraded on the other hand, upper age limit for primary school teachers appointment was relaxed (Sajid, 2006). But the proper implementation of more realistic targets once again put behind because of unqualified teaching staff, poor infrastructure and limited numbers of educational institutions. State Bank of Pakistan[9] (2010) reported that during seventh five year plan implementation only one professional college for women was established in Pakistan. Eighth Five Year Plan (1993-98) followed the same trend of education objectives of Seventh Five Year Plan (i.e. increasing the literacy rate and emphasis on universal primary/basic education for both boys and girls). In year 1992-93, Social Action Programme (SAP) was launched, to accelerate the integrated development of basic education with great emphasis on improving female literacy and their access at primary level (Sajid, 2006). However, female literacy rate was remaining 32 percent in year 1998 (Social Policy and Development Centre, 2003).

1.9.3 Education Policies (1970 to 2010)

Government of Pakistan since early independence had launched various milestones oriented policy documents and several action plans periodically for boosting up the education system in the country. Table 1.10 highlights the summarized key aspects of education policies in Pakistan with women education focus. Deep inside study of the policies framework indicates that more or less all education policies documents revised same desired goals this indicative that previous policies was not successfully achieved its settled targets.

[9]State Bank of Pakistan is the central bank of Pakistan started operation on first July 1948.

Table 1.10: Key Aspects of Education Policies in Pakistan with Women Education Focus

Education Policies	Years	Key Aspects	Women Education Focus
New Education Policy	1970	To achieve universal primary education by 1980, Islamic values, Manpower development, Equal access to education opportunities, To establish new universities.	To achieve universal primary/basic education for girls & separate schools for girls
National Education Policy	1972	To achieve universal primary education, Literacy rate, Nationalization of private institutions, Equal access to education opportunities, Manpower development, Establishment of new universities.	To achieve universal primary/basic education for girls, Equalizing female enrolment at all levels. To appoint female teachers.
National Education Policy	1979	To achieve universal primary education, Literacy rate, Better educational structure, Islamic values	To achieve universal primary/basic education for girls, Establish two women universities
National Educational Policy	1992	To achieve universal primary education, literacy rate, Quality of education, Private sector encouragement, Islamic values	To achieve universal primary/basic education for girls. To enhance female teaching staff.
National Educational Policy 1998-2010	1998	To achieve universal primary education, Literacy rate, Manpower development, Islamic values	To achieve universal primary/basic education for girls. Enhance female teaching staff; To establish women universities, Female teachers training.
National Education Policy	2009	To achieve universal primary education, equality in education by gender and area, 10 percent enrolment of 18 to 23 years old youth in higher education, Teachers training, Improvement in curricula and text-books, Islamic values	To achieve universal primary/basic education for girls, elimination of gender biases from text books &adequate female representation in curricula and text-books reviews committees.

Source: (Isani & Virk, 2003), (Zaidi, 1999) Social Policy & Development Centre Annual Review, 2003) & (Pakistan Institute of Legislative Development and Transparency, 2011).

- Government of Pakistan made its last education policies (i.e. National Educational Policy 1998-2010 and National Education Policy 2009) and sets the targets to achieve up to 2015 and up to 2025. After presenting these policies, there are various action plans (such as National Plan of Action (2001–2015) and The National Plan of Action (2013-16) and different policy recommendations documents (such as Pakistan 2020: A Vision for Building a Better Future) are presenting from time to time for proper implementation of policies (Ministry of Education, Trainings and Standards in Higher Education Government of Pakistan, 2013).

The New Education Policy 1970 prepared for a period of ten years. Policy proposed more separate schools for girls but political disruptions did not allow the proper implementation of the policy including achieving universal primary education for girls (United Nations Educational, Scientific and Cultural Organization, 2010). The New Education Policy 1970 was replaced by another new policy as Education Policy 1972-80 (Saeed & Muhammad, 2011). In pursuance of education policy recommendation six new universities and campus colleges of engineering were

established without single university for women (State Bank of Pakistan, 2010). During 1971-72 to 1980-81 female literacy and enrolment at all stages were expand. On other had nationalization of privately managed institutions, resulted in the lowering of education quality and burden of teacher's salaries on public sector (Social Policy and Development Centre, 2003). The National Education Policy 1979 was announced in February 1979 for next ten years. Policy recommendations were not in favor of co-education system, it claims that in an Islamic society boy's and girl's education should be separate at all education stages (Saeed & Muhammad, 2011; Zaidi, 1999). It was found that girl's education has been grossly neglected during past years therefore, Government designed intervention programmes and schemes focused to improve girls' education component for example, in year 1981 education program Literacy and Mass Education Commission (LAMEC) was introduced, particularly aimed to improve rural girl's education, this program replace by Nai Rosina schools in 1986 (Bengali, 1999). Nai Roshni School program opened Schools and registered learners but after 2 years with the change of government, education Programme was abandoned (Bengali, 1999). Mohalla (Community) and Mosque School was other innovative schemes did not gives successful results regarding upgrading the female's education in Pakistan (Bano, 2007). It was recommended to establish two women universities but once again not a single university for women was established. The population pressure and limited amount of financial resources has never allowed a full expression of the desired positive change towards universal primary/basic education and literacy rate for both male and female population.

The National Education Policy 1992 was another attempt at policy level, the aim of the policy was to streamline the education process. But the policy could not implement at desired level mainly because of limited resources, political instability and lack of policy makers commitments (Zaidi, 1999). However, in pursuance of recommendation, policy achieve some targets such as in order to provide quality education to rural girls Model Primary School was established at union

council level and to enhance female teaching staff, required qualifications of teachers have been lowered (Bengali, 1999). In year 1998 government of Pakistan announce National Education Policy 1998-201. At policy recommendation first time in the history of Pakistan for female's two universities was established as Jinnaha University for Women and Fatima Jinnah Women University in same year 1998 (Isani & Virk, 2003). Beside that Government of Pakistan developed the National Plan of Action (NPA) on Education for All 2001–2015 and The National Plan of Action 2013-16 these program supports the private sector initiatives to develop and implement formal and non-formal education programmes for girls (Ministry of Education, Trainings and Standards in Higher Education Government of Pakistan, 2013). The new National Education Policy of Pakistan was approved by the Government in September 2009. At policy recommendation free textbooks are provided in all public schools and various scholarship schemes have been introduce for needy students (Farooq, 2013). Improved learning environment is an important tool to attract illiterate female population towards education therefore, government focus to improve physical infrastructure and basic facilities in government primary and elementary schools.

Assessment of all planes taken together reveals that in general every five year plan acknowledges the great significance of education however, in case of emergency need education sector's funds was deducted and this sector receive less than its due share. A common trend as to enhance education in quantity with little focus on the quality and type of education was observed. Although every plan more or less gave some importance to women education however the common focus of almost every plan was to achieve universal primary/basic education particularly for girl's shows that beside forty years of five years of planning, Pakistan remains unable to provide basic education to all its peoples whereas, girls remain more deprive. Policy makers realized that the development of five year plans was not practicable due to rapid changes in domestic and global economy therefore, policy of five years plans were further not proceed.

Government of Pakistan has made serious efforts to address the issue of girls' education, at the macro-level. All education policies, plans and reforms were giving some importance in order to remove gender disparity and to upgrade women education status in Pakistan which has resulted in an improved scenario however, much needs to be done because besides all above initiatives the situation of girls' education has not satisfactorily improved, government still not able to achieve the required education standard (i.equality and quantity both) even basic or primary education is still not in the access to all its population. It is analyzed that policy formulation is not enough criteria to develop a strong and effective education system, infect successful education system depend on proper implementation of policy which further depends upon honest and hard working staff, sufficient funding and political stability of country unfortunately, Pakistan lack of all these properties. Due to political instability different education Programme was abandoned without giving fruitful results, for example Nai Roshni School. However, government achieved some targets and Pakistan made some progress in education sector since its existence consequently, women education status up to some extent has been improved.

1.10 Outcomes for Female's Disparity in Access to Education in Pakistan

The major outcomes of this chapter with reference to female education in Pakistan are discussed as below.

1.10.1 Insufficient Education Expenditures

Investment in education sector has great importance for human and economic development of the nations (Iqbal. et al., 2013). Insufficient financial resources for education sector hampered the efforts to open more education institutions at all levels, provide missing facilities in educational institutions and offer incentives to female child from poor families (Begum et al., 2011). The level of public spending into education sector shows government commitments towards the progress of education sector in the country (Qasmi, 2009). Government of Pakistan

tries to adopt feasible policies and to spend desirable amount on education sector but in reality education sector has faced the problem of under investment since many years. Table 1.11 highlights that the expenditures on education sector from 2000-01 to 2009-10, increased in billion rupees either current or development whereas, as percentage of Gross Domestic Product (GDP) there is no significant change can be seen during last decade. In context of budget allocation by public education sector, at the global ranking Pakistan continue to rank at the bottom end without prominent improvement. Infect continue declining trend observed during last three years. Chitrakar (2009) said that Pakistan spend lowest as public expenditure on education in the region and stand among the bottom five countries of the world for lowest percentage of public spending on education.

Table-1.11: Expenditure on Education Sector n=10

Expenditure on Education in Billions Rs.				**Expenditure on Education**	
Year	**Current**	**Development**	**Public Sector Expenditure on Education**	**% of GDP**	**% of Total Expenditure**
2000-01	69.5	6.4	75.9	1.8	11
2001-02	70.4	8.5	78.9	1.8	10
2002-03	79.5	10.4	89.9	1.9	10
2003-04	94.3	29.9	124	2.2	13
2004-05	106.6	33.4	140	2.2	12
2005-06	128.9	41.9	171	2.2	12
2006-07	159.9	56.6	217	2.5	12
2007-08	190.2	63.5	254	2.5	10
2008-09	200.4	75.1	276	2.1	12
2009-10	N.A	N.A	N.A	2	N.A

Source: Economic Survey of Pakistan (2008-09) & Economic Survey of Pakistan (2010-11)

World Bank, Asian Development Bank, United Nations Educational, Scientific and Cultural Organization (UNESCO), International Labour Organization (ILO), European Union, Japan, America, Canada, and Germany, and so on other organizations provides financial support to Pakistani government in term of aid, grant, loan etc for improvement of education sector United Nations Educational, Scientific and Cultural Organization (2012). However, Government of Pakistan has not yet recognized the importance of education sector for the socio economic development of a country because, it's financial spending for education has remained around 2% of Gross Domestic Product (GDP) since last many years (Economic Survey of Pakistan 2009-10). Therefore it is stated that lower investment is one of the major reasons of lower women education status in Pakistan.

1.10.2 Socio-Economic Obstacles

Poverty is widespread in Pakistan this is also the cause of low female access to education in the country. For giving access to education to all Government of Pakistan abolished school fees and provide free textbooks to all students in public sector however, parents had to bear cost of stationary items, note books, uniforms, transport etc. Whereas, in Pakistan prominent ratio of poor population remains unable to bear education expenditure consequently, many poor children remain way from the education. In Pakistan many communities are culturally sensitive where girl's education is not encouraged (Mohammad and Khan, 2008). These communities believe that there is a risk for girls' safety and honor especially when there is a long distance to travel (Qasmi, 2009). In traditional conservative communities of Pakistan girls are suppose to being responsible for domestic work therefore there is little incentive to educate them in contrast, sons are suppose to have high economically valuable as being responsible for earning (Mohammad, 2013). Therefore educating female is considered as a monetary loss as being unproductive for home in contrast, educating male is consider as a good investment. Girl's absenteeism and

dropouts from schools is also the obstacle that keeps low women education status in Pakistan. According to Mohammad (2013), in poor and rural sections of Pakistani society many girls not regularly attending schools and stay at home for domestic work this is the most common actual triggers induces long-term absenteeism and finally dropout of girl's from schools. The Islam religion allows getting religious and non religious education for both women and men without any discrimination (Fathe Mohammad, 1998). However, in some parts of Pakistan, particularly in rural and tribal areas parents proposed only Islamic education for their daughters and girls' education only limited with reciting of Holy Quran without translation (Annual Status of Education Report, 2013). Therefore, it is stated that as an Islamic nation Pakistan should not experience gender disparity in education however, the education status of women in Pakistan mostly based on irrespective of Quranic percepts that negatively affect female education in Pakistan.

1.11 Conclusions

This chapter shows that education has great importance in general and for women in particular, it also play major role towards uplifting of society and its qualitative contributions in economic prosperity. Pakistan can develop its weak and unstable economy through proper educating and utilizing women population (i.e. 48 percent of the total population). However in Pakistan large proportion of female population (i.e. 55%) in this modern area remain illiterate. Disparities in women education is most prominently within rural Sindh and Balochistan. Chapter also shows that Government of Pakistan has been developed a comprehensive structure of education system in the country for providing education at all stages. However, the assessment of various education indicators including literacy rates, net and gross enrolment trends indicate that provincial, regional and gender disparities in education still pronounced in Pakistan. Since the creation of Pakistan all policy documents including five years plans and ten years polices

emphasis on girls' education and introduces different schemes and programs. However, the scarcity of financial resource and political instability were the major causes of unsuccessful results of policy framework. Beside that chapter found that there are various structured and unstructured factors (i.e.traditionally conservative attitudes, lack of funding and improper utilization of funds, poverty, wrong religious perceptions etc) contribute to disparities in women education within state. This opens area to investigate the impact of disparities in women education on their representation in higher education sector of Pakistan with special focuses on Sindh province.

Chapter Two

Women in Higher Education Institutions (HEIs)

2.1 Introduction

Chapter one explains the status of women education in Pakistan, particularly, at stages of education previous to higher education, and identifies the impediments in the direction of women education in the country. Over the past decade importance of women's higher education were widely recognized as a core of socio-economic development of a country. Developed and developing countries makes efforts for equal women's participation in higher education sector which can be translate their contribution into labor market. However, higher education sector itself faced unequal women representation at academic and management cadre. Therefore, this chapter enumerates the steps that country were taken as to upgrade state and growth of women representation in higher education sector, chapter critically analyzes the enrolment trends at tertiary level, female representation in teaching, management and research with special focus on Pakistan. In addition, study also identifies the factors and socio-economic impediments towards women's undermine status at university level.

2.2 Higher Education Institutions (HEIs)

Higher education institution or university refers to the ***"institution at highest level of education where a person can study for a degree or do research" (Oxford Advanced Learner's Dictionary, 2005, p.1675).*** The term institution refers to a large important organization that has been established for a particular purpose whereas; higher education refers to the education and training beyond the secondary stage in college and university (Oxford Advanced Learner's Dictionary, 2005). Therefore, the higher education institution can also be defined as a large

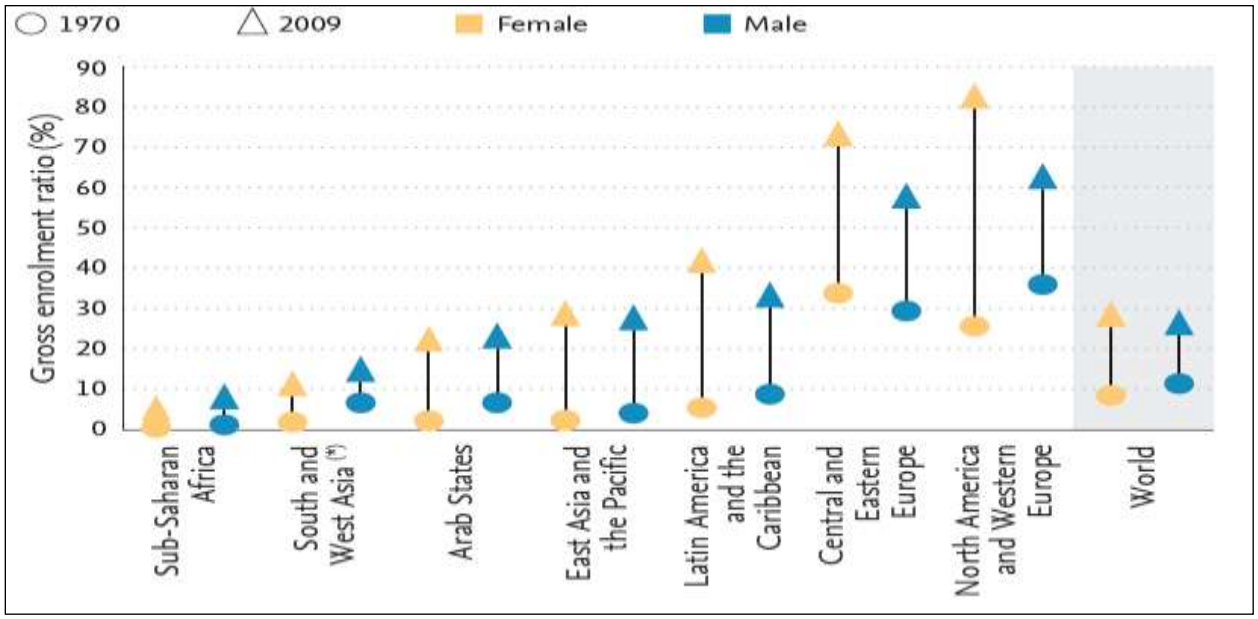
institution created to educate and to train the pupils or imparting education at higher level including research. Higher education institutions are dynamically related to the society and suppose to be a constitute microcosm of a society and its inequalities (Assié-Lumumba, 2006). There are different institutions often as a part of a university provide undergraduate, postgraduate, training and vocational education (this includes colleges, professional and training schools and other organizations) but university occupies a most significant position as an institution for higher education where highly qualified faculty involved in teaching and provide research facilities (Zaman, 1998). In the structure of higher learning environment to university male and female members of society participated as agent and subject in the production and promotion of knowledge and research (Isani& Virk, 2003).Universities give space to both gender to utilize and enhance their leadership and decision making skills and abilities as to be work at management and problem solving positions (Tanvir- uz- Zaman, 1998).

2.3 Women Higher Education (International Scenario)

Over past decades female improve their relative positions at all education levels (The Global Gender Report, 2011).Today at tertiary level female students are much more or close to men. United Nations Educational, Scientific and Cultural Organization (2012) reported that at tertiary level out of 131 countries, in 92 states gross enrolment ratio for women is higher than men. Figure 2.1 demonstrates the comparative analysis of male-female gross enrolment ratio in tertiary education by region and worldwide for year 1970 and 2009. Comparative analysis shows shifted gender gap from male to female advantage into various regions such as in Latin America and the Caribbean, Central and Eastern Europe, and in North America and Western Europe. In contrast, unequal female access to higher education and slow growth in their relative positions can be seen in some pockets of the world including South and West Asia and sub-Saharan Africa. According to Onokala & Onaha (1998) in Nigeria uneducated parents, poor career

guidance, early marriages and child-bearing, ignorance, poverty and sex discrimination system are the major factors which create great disparity at the tertiary level.

Figure-2.1: Male-Female Enrolment at Tertiary Level (%)



Source: (United Nations Educational, Scientific and Cultural Organization (UNESCO), 2012, p.77)

United Nations Educational, Scientific and Cultural Organization (2010) reported that poverty gender disparity in access to primary and secondary education, high female drop-out ratio at all education levels, small numbers of universities exclusively for women and limited government spending on education sector, led to unequal female share at tertiary education level.

2.3.1 Disciplines

At tertiary level gender gap in favor males more widely pronounced in non-traditional[10] or male dominating fields of study (including Engineering, Commerce etc) without any prominent difference between developed and underdeveloped countries (United Nations Educational, Scientific and Cultural Organization, 2010).

[10]Those courses in which female enrolment remain less than 40 percent.

Table 2.1 demonstrates that female students not evenly distributed regarding study fields. Data revels that subject education is most popular in female students in most countries. In contrast, women are least likely to graduate in the field of Engineering, Manufacturing and Construction. Furthermore, a mix of patterns is found in the fields of Science and Social Sciences, Business and Law.

Table-2.1: Female Graduates by Country and by Fields of Study (%) n = 13

Countries	Education	Arts & Humanities	Science	Engineering, Manufacturing & Construction	Health & Welfare	Social Sciences, Business & Law
Bahrain	48	85	73	26	83	71
Oman	65	88	64	25	78	59
Iran	70	68	69	27	72	53
Turkey	57	54	44	23	66	47
Ethiopia	15	22	18	14	24	23
Australia	74	64	36	24	77	54
Japan	75	69	26	12	63	38
Austria	78	66	33	19	68	57
France	71	71	36	23	73	63
Spain	82	61	36	27	78	63
Switzerland	71	61	28	13	78	47
United Kingdom	75	62	38	21	80	56
United State	78	59	41	19	82	56

Source: United Nations Educational, Scientific and Cultural Organization Institute for Statistics (2010), pp.182 to 191

Clustering of female into traditional fields[11] of study keep limited their access into labor market or keeps them far to work side by side with men at leadership and decision-making positions. According to Hill et al., (2010) female self interest in particular fields (including education, medical etc) and cultural norms (such parents believes that girls have to avoid male dominating fields) are the major factors for low female enrolment in certain field of study (engendering, commerce etc).

2.3.2 International Initiatives

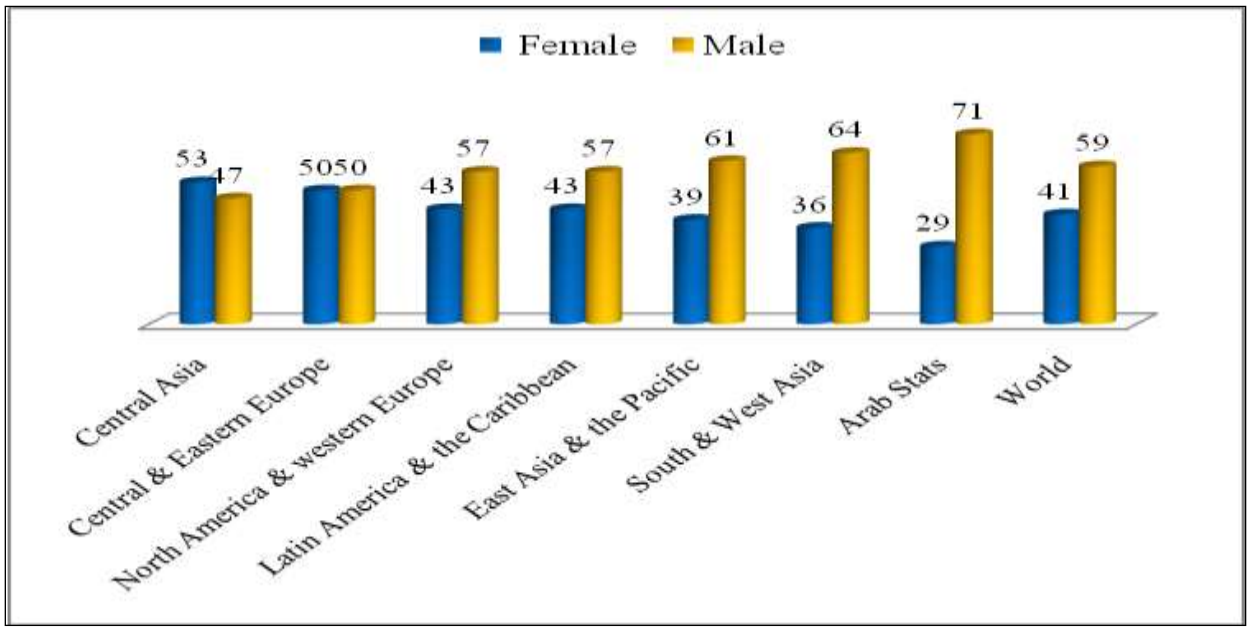
Over past decades nationally and internationally importance of female share in tertiary education were recognized. Countries provide necessary support at government and institutional level by anti-discrimination legislation and regulation. The Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), adopted in 1979 by the United Nations General Assembly, which sets out principles and measures to achieve equal rights for women everywhere (Singh, 2002). The 1995 Commonwealth Plan of Action on Gender Development provides a framework for gender equity within commonwealth countries (United Nations Educational, Scientific and Cultural Organization, 2012). The National Policy of Education (1986) formulated by Government of India as an attempted to address basic issues on women's equality in education sector. In Australia, the 1984 Sex Discrimination Act; the 1986 Affirmative Action Act; and the 1988 National Agenda for Women laid the foundations for women's equity, training and development as well as reporting to an affirmative action agency (Singh, 2002).The Saudi Government implements a new reform policy as well as instituting a series of initiatives such as King Abdullah bin Abdul Aziz Al Saud Project for General Education Development. The project is a new measure launched to introduce changes to the education system with special focus on female education (Saudi Ministry of Higher Education, 2010).

[11] Those courses in which female enrolment remain more than 40 percent.

2.3.3 Women at Academic Cadre in Higher Education Institutions (HEIs)

University which is expected to play a proactive role in achieving the goals of equality of opportunity in the society is till now facing the acute problem of gender inequity in respect of overall representation of women in academic and administrative positions in higher education sector (United Nations Educational, Scientific and Cultural Organization, 2012).

Figure-2.2: Men-Women Teaching Staff at Tertiary Level by Region and Worldwide (%)



Source: United Nations Educational, Scientific and Cultural Organization Institute for Statistics (2011), p.189)

Figure 2.2 highlights that beside Central Asia and Central Eastern Europe women faculty status within all reported regions is not equal to men counterparts even highly unsatisfactory in some regions (i.e. Arab State & South and West Asia). This indicative that gender inequity at academic cadre in higher education institutions is an important issue not only in Pakistan but in many parts of the world.

At academic cadre in Higher Education Institutions (HEIs) women also poorly participated at senior academic positions. Table 2.2 shows that women academic staff made progress at lower academic position as becomes more than male faculty members in Spain (i.e. 52 percent) whereas in Australia, Belgium, Denmark, Netherland and in United Kingdom close gender gap is observed. However, at each senior academic position the proportion of women is dropping. This indicative that there are some hurdles still present all over the world which prevent women as to improve their academic status up to most senior level.

Table-2.2: Women at Academic Cadre in Higher Education Institutions (%) n= 7

Country	Lecturer	Assistant Professor	Associate Professor	Full Professor	Total
Australia	41	40	18	14	35
Belgium	48	31	25	11	35
Denmark	44	37	25	12	33
Germany	38	33	18	12	33
Netherland	42	32	18	11	34
Spain	52	48	36	18	43
United Kingdom	46	47	37	18	42

Source: European Commission, (2009)

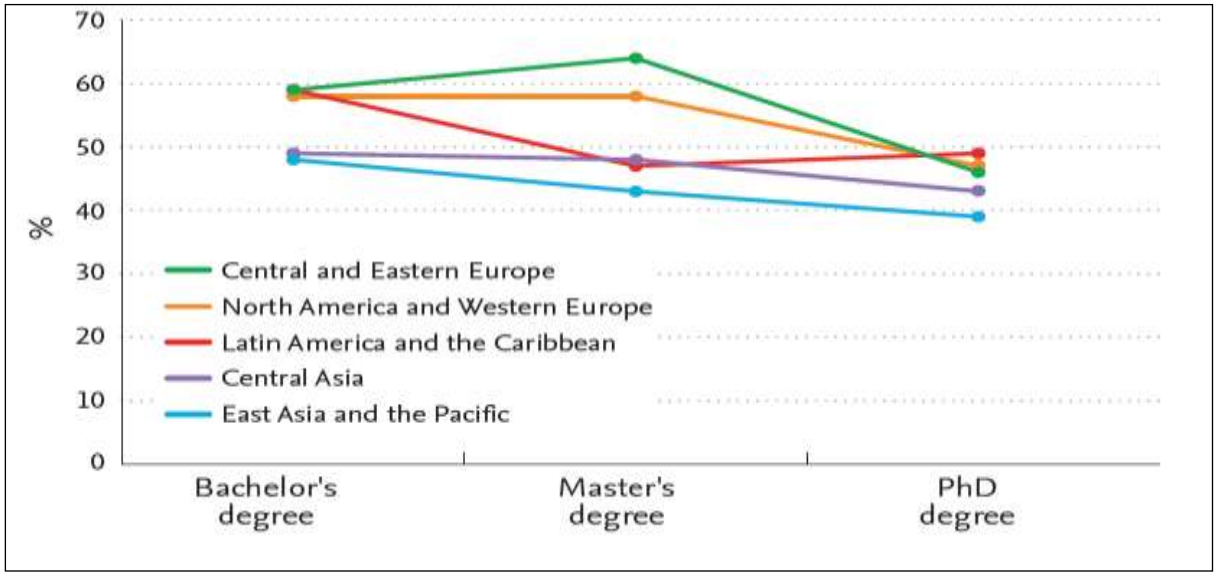
According to Tower et al. (2007) the low level of representation of women in senior academic ranks is largely related with two factors. First, women academics are significantly less likely to publish papers in research journals and have less PhDs than men (i.e. due to family responsibilities particularly during childrearing[12] years).

[12]It is the process of promoting and supporting the physical, emotional, social, and intellectual development of a child from infancy to adulthood.

2.3.4 Women in Research in Higher Education Institutions (HEIs)

According to Hill et al., (2010)Women participation in intellectual research environment is positively increase but almost all over the world women faculty still not equal to men in the field of research. Women faculty motivation towards their education qualification advancement and research publications is the core pillar for the rapid expansion of their employment status at university level and play significant role in enhancement of women's intellectual potential because faculty recruitment and promotion process largely depends on their research output (European Commission, 2009).

Figure-2.3: Women Representation by Degree Level (%)



Source: United Nations Educational, Scientific and Cultural Organization (UNESCO) 2012, p.81

Higher qualification (such as PhD degree) is required criteria to promote faculty members at senior teaching and key management positions. Whereas, figure 2.3 reveals that in Central Asia and in East Asia & Pacific there is a decline in the proportions of female graduates at the Master's and PhD degree levels whereas in other regions such as in Central & Eastern Europe

and North America and Western Europe female access at Bachelor's to Master's degree level showing increasing trends than falling at PhD level this indicative that women face considerable hurdles as they move up the educational ladder to research careers. According to United Nations Educational, Scientific and Cultural Organization (2012) and Bell (2009) domestic responsibilities interrupt women research activities therefore women are less likely to have a completed a PhD or take more time as to finish their doctoral qualifications. On other hand female faculty also unevenly found by disciplines (i.e. 27 percent full professors in humanities, 18.6 percent in social sciences and 7.2 percent in engineering and technology) therefore, women participation in the field of research is more striking in the field of science (European Commission, 2009). The lack of significant numbers of research publications is another cause of gender differences in career advancement in higher education institutions. Tower et al. (2007) examines the top six journals in the world and found that women represented almost 30 percent of the authors in the top tiered journals. According to Bell (2009) due to domestic responsibilities in early professional career at university level male faculty members had a significantly higher numbers of total publication index than female faculty members.

2.3.5 Management

Management refers to that process through which an organization able to achieve their specific objectives while manager refers to the person who actually guide to the organization in order to achieve their specific objectives (Siddiqui, 2003). Management is a complex and multidimensional responsibility required various skills and abilities in order to efficiently perform management responsibilities and to make correct decision (Bovee et al, 1993). According to Saeed (2005) management deal with policy making, policy implementation, setting objectives and developing strategies to operate organization in effective and efficient manner, to achieve settled objectives. The basic management structure can be divided into three levels of

management in order to managerial responsibilities (i.e. top, middle and first-line management levels). At top /high management level managers such as president, and vice-president makes decisions regarding the firm's long- run objectives (Anwar, 2005). At Middle Management Level, managers such as department heads, directors etc often responsible for the firm's short-term decisions (Shah, 1999). At Supervisory/First-Line Management Level, manager usually/highly involved in supervising activities with the employees who engage in the day-to-day activities (Varma & Aggarwal, 2009, Shah, 1999 & Anwar, 2005).

Management and administration are at times used interchangeably however, administrators are those managers who ensure that action and policies are put into practice whereas, top managers formulate polices (Varma & Aggarwal, 2009, Shah, 1999 & Anwar, 2005). In Higher Education Institutions (HEIs) the senior executives are responsible for goal setting and visions development, while senior administrators supervise major division of university to function, develop strategies, responsible to create healthy working environment inside institutions, and report to president (Zaman, 1998). Middle management more concern with near future and responsible for proper policy implementation (Varma & Aggarwal, 2009 &Zaman, 1998).

2.3.6 Women at Management Cadre in Higher Education Institutions (HEIs)

Women involved in all sectors of economy, participated at policy making and decision making positions in government and non-government sectors however, women representation remain unequally to men in many fields (United Nations, 2010). According to Singh (2002) in spite, of women advancement in many areas women still underrepresented in area of management in higher education institutions and gender disparity[13] exist at all levels of management infect, the ratio of gender disparity is increase as move up from lower to top management level.

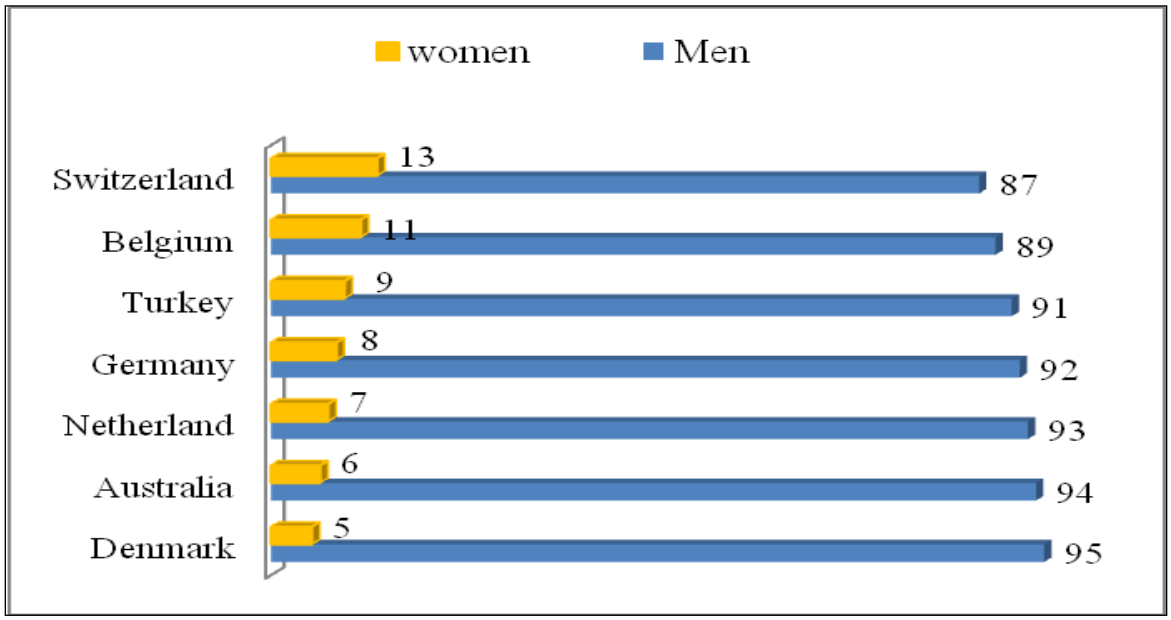
[13]The unequal treatment or perceptions of individuals based on their gender.

Since past three-four decades at national and international level various programs workshops and conferences were organized (this includes world conferences on higher education etc) in order to provide opportunity to women to contribute meaningfully within management cadre in higher education institutions on an equal basis with men. In 1985 Canadian International Development Agency (CIDA) initiated a programme to examine the small numbers of women in policy-making positions and top executive posts and to address the factors contributing to the problem. In 1986 and in 1988 Association of Commonwealth Universities (ACU) organized training programs in India, for women as to develop their leadership skills in university management (Onokala & Onaha, 1998). In 1995 Beijing Platform for Action (BPA) and 4th World Conference on Women (1995) focused to ensure worldwide full and equal participation of women in all educational management position (Wallace & Smith, 2011). In Australia First Action Plan (1999-2003) and Second Action Plan (2006-2010) was develop for women employed in Australian universities. The Priority goals of the Action Plans was to recognize the challenges and identify the barriers faced by women in progressing to senior academic and management levels in higher education sector in Australia (Bell, 2009). According to Wallace & Smith (2011) in many pockets of the world legislation for gender is still far away to enable women to reach equally in significant numbers with men at leadership and decision making positions in higher education institutions. In European countries at tertiary level female enrolment proportions are more than male but at management cadre in higher education institutions women still not equal to men for example in Spain only 4% of university Vice-Chancellors are women (European Commission, 2008).

Figure 2.4 presents the wide gender gap as head of higher education institution institutions among reported countries for year 2007. Data indicate that beside many initiatives women still do not have access to participate equally with men at management cadre in higher education institutions. Women status at leadership positions in higher education sector still undermine on

the one hand; small numbers of women at leadership positions create difficulties for young female academia to find female role models.

Figure 2.4: Heads of Higher Education Institutions by Country and by Gender (%)



Source: European Commission (2009), P.97

According to Wallace & Smith (2011) there are various factors suppose to responsible for women representation at management cadre in HEIs such their self interest to be participate in management activities, undervaluing their management abilities.

2.4 University/Degree Awarding Institutions in Pakistan (Historical Perspective)

"A university is an institution of higher education and research which grants academic degrees in a variety of subjects" (Pakistan Education Statistics, 2010-11, pp17). In 1947at the time of independence, Pakistan inherited only two universities that is University of Punjab as full functional university and University of Sindh which affiliated with Bombay University; there were no single women university or professional collage for women. (Azra et al., 2011).Since

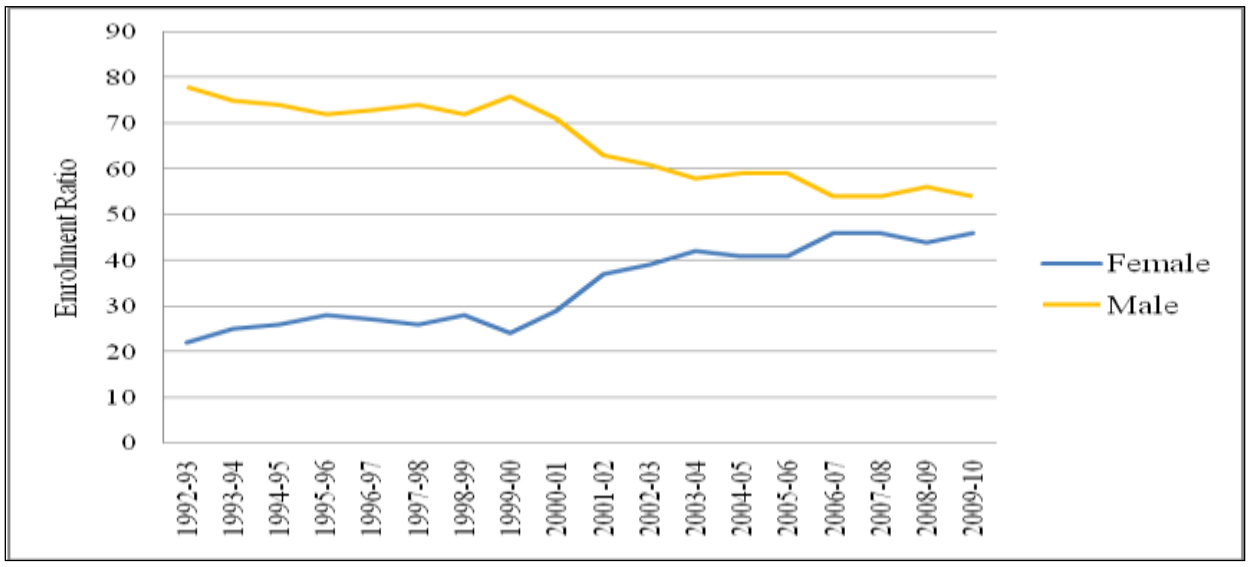
independence of Pakistan the process of expansion of new universities was slow but in last two decades higher education received significant attention from Government of Pakistan therefore, significant positive change in higher education sector is observed (Rizwan and Syed, 2012). ***"There are total 135 universities providing their services in both public and private sector of education. Out of these universities 76 (56%) are working under umbrella of public sector, whereas 59 (44%) are working under the supervision of private sector" (Pakistan Education Statistics, 2010-11, pp17).*** The Aga Khan University[14] established as first recognized private university of Pakistan in 1983 (Isani & Virk, 2003). However regional discrimination present at higher education level, Punjab province occupy highest number of universities whereas, Balochistan province occupy lowest number of universities (Pakistan Education Statistics, 2010-11). Higher education occupied important role in all education policies in Pakistan. In 1952 government felt the need for inter-university body for co-ordination, large funding and for oversee the structure of higher education (Tariq, 1998). Therefore, in 1952 Inter University Board (IUB) was introduced but until need for more strong body was there (Azra et al., 2011). In 1974 University Grant Commission (UGC) was established and government recommended that, all universities shall be regulating with the University Grant Commission but controversy was there because the co-ordination, support and funding of University Grant Commission (UGC) was not sufficient to meet the requirement of Higher Education as well as there were verity of universities was established like mono-discipline and multi-discipline institutions, so in 2002 University Grant Commission (UGC) replace by Higher Education Commission (Rizwan and Syed, 2012). All universities public as well as private regulated under Higher Education Commission (HEC), which is an autonomous body &majorly responsible for higher education policy quality assurance (Tariq, 1998).

[14]The Aga Khan University is a coeducational research university spread over three continents.

2.4.1 Women's Higher Education in Pakistan

Since independence of Pakistan the male and female enrolment rates in universities and Degree Awarding Institutions (DAIs) have been exponentially increases despite this rise, these numbers are still not encouraging. At policy level Government of Pakistan has made efforts to remove gender disparity and to upgrade women education status in country. The education policy 1998-2010 was targeted to achieve at least five percent enrolment ratio of the 17 to 23 age youth at higher education level (Saeed & Muhammad, 2011 & Isani &Virk, 2003). However, United Nations Educational, Scientific and Cultural Organization (2012) reported that in Pakistan in relation to the total population only 3.7 percent of the 18 to 23 years old youth participating in higher education whereas, female proportion is less than male.

Figure-2.5: Male-Female Enrollment at Tertiary level in Pakistan (%) n=18



Source: Pakistan Economic Survey (2011-12)

In figure 2.5 upward trend of female participation ratio and narrow gender gap at higher education levels shows development of favorable environment for female which results enabling their access to higher education level in Pakistan. But gender gap indicates that poor education system and wide-ranging access to all levels of education are still major issues in Pakistan.

2.4.2 Disciplines

In Pakistan female's preferred field of study at tertiary level is also another issue because gender gap in favor males more widely pronounced in male dominating fields of study (including Engineering, Commerce and Mathematics etc). In table 2.3 enrolment trends demonstrates that clustering of female are found in Medical and Education.

Table-2.3: Female Enrolment in Professional Colleges in Pakistan by Field of Study n=10

Years	Engineering		Medical		Commerce		Education	
	Total	Female	Total	Female	Total	Female	Total	Female
2000-01	10445	124 (1)	22905	11947 (52)	55233	7853 (14)	8742	4979 (57)
2001-02	10040	114 (1)	18005	10001 (56)	55377	7883 (14)	8202	5026 (61)
2002-03	9177	133 (1)	18880	10547 (56)	57255	7303 (13)	7774	5150 (66)
2003-04	9403	172 (2)	19189	10536 (55)	58425	7605 (13)	8302	5681 (68)
2004-05	11276	317 (3)	19303	10709 (56)	69302	11473 (17)	8504	6428 (76)
2005-06	12850	230 (2)	19893	11074 (56)	72984	12586 (17)	9697	6117 (63)
2006-07	17740	272 (2)	19760	10932 (55)	78611	12992 (17)	10881	6894 (63)
2007-08	12153	1498 (12)	21126	11454 (54)	73527	13285 (18)	9023	5570 (62)
2008-09	13018	1740 (13)	21718	12000 (55)	100979	24418 (24)	9243	7211 (78)
2009-10	13543	1974 (15)	21837	12195 (56)	103106	23019 (22)	6924	4928 (71)

Source: Federal Bureau of Statistics of Pakistan, 2011

- Figures in parenthesis are percentage.

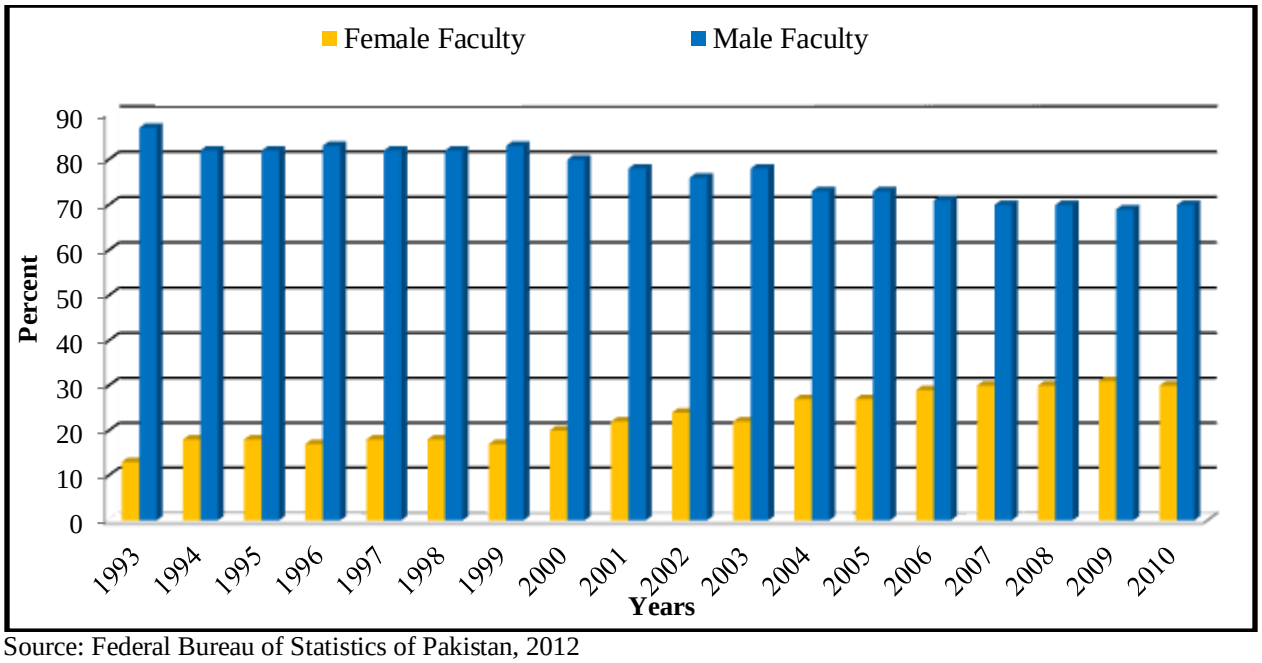
Although female improved their relative positions within Commerce and Engineering fields of study however, these fields still pronounced as male dominating areas. According to Pakistan Education Statistics(2010-11) in Pakistani society where parents believes that their daughter

have to chose that subject and profession in which female are in majority in order to have minimum contacts with male counterparts therefore, clustering of females studs are found in education and medical fields of study.

2.4.3 Women at Academic Cadre in Higher Education Institutions (HEIs) of Pakistan

In Pakistani traditional society often men are supposed to be the responsible to fulfill the financial need of the family whereas, women's role limited with housekeeping (Syeda et al., 2006). This pattern of gender role often restricted even to educated women to equally participate with men into labor market. Economic survey of Pakistan (2012) reported that in labor market Pakistani women participation is only 22 percent as labor force.

Figure-2.6: Male-Female Teaching Staff at Tertiary Level in Pakistan (%) n=18



Source: Federal Bureau of Statistics of Pakistan, 2012

Figure 2.6 highlights that over past years women academic representation in higher education sector has been improved but gender gap still exist in universities in Pakistan. This is due to

increase in female enrolment proportions and government initiatives. Pattern of gender role in Pakistani society, limited pool of female students at all levels of education; cultural constraints (such as early marriages etc) are the major issues responsible for unequal women faculty representation in higher education institutions of Pakistan.

Table-2.4: Women Faculty in Professional Colleges by Disciplines in Pakistan n=10

Years	Engineering		Medical		Commerce		Education	
	Total	Female	Total	Female	Total	Female	Total	Female
2000-01	785	10 (1)	3252	799 (25)	1519	112 (7)	592	255 (43)
2001-02	887	13 (2)	2802	691 (25)	1600	133 (8)	577	251 (44)
2002-03	635	15 (2)	2796	747 (27)	1819	217 (12)	583	262 (45)
2003-04	636	15 (2)	3064	815 (27)	2013	194 (10)	582	248 (43)
2004-05	853	30 (4)	3031	781 (26)	2185	241 (11)	610	264 (43)
2005-06	873	36 (4)	2805	684 (24)	1908	194 (10)	510	225 (44)
2006-07	843	29 (3)	3558	1114 (31)	2350	310 (13)	612	229 (37)
2007-08	779	106 (14)	3829	1133 (30)	2380	323 (14)	520	202 (39)
2008-09	749	126 (17)	3634	984 (27)	3142	651 (21)	455	211 (46)
2009-10	994	203 (20)	3869	1130 (29)	3114	719 (23)	400	203 (51)

Source: Federal Bureau of Statistics of Pakistan, (2011)

- Figures in parentheses are percentage.

Table 2.4 shows women representation at academic cadre by disciplines. Data highlights that due to increase in female enrolment proportions and government initiatives over past years female improved their relative positions within commerce and engineering fields however, these fields still pronounced as male dominating areas. Clustering of female students is found in medical and education therefore, comparatively encouraging female faculty participation in education is observed. Pattern of gender role in Pakistani society, limited pool of female students at all level

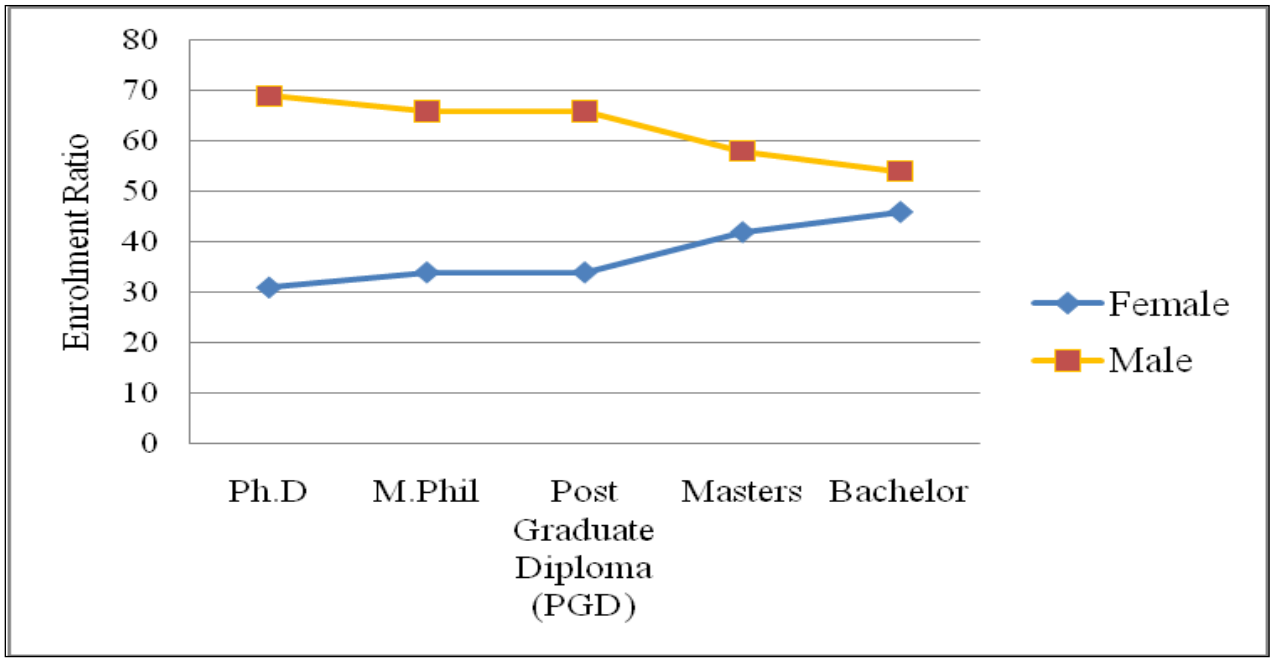
of education, cultural constraints such as early marriages etc are the major issues responsible for unequal women faculty representation in higher education institutions of Pakistan. In addition poor participation of female students in fields related to science and technology limited women faculty access by academic disciplines (Pakistan Education Statistics, 2010-11)**.**

2.4.5 Women in Research in Higher Education Institutions (HEIs) of Pakistan

Universities in Pakistan (like general trend in the world) expected significant contribution from men-women faculty members in the field of research side by side with teaching and management responsibilities (Hamid &John, 2006). Educational degree advancement in the field of research and publication in research journals is the important indicator to measure the research performance of faculty members (Zia et al., 2010). According to Higher Education Commission of Pakistan eligibility criteria, PhD/specialization in related fields and particular numbers of research publications also required to promote faculty at senior academic positions that is associate professor and full professor (HEC Official Website, 2014). Faculty appointments at higher academic ranks also provide opportunity to them to participate at key management positions (this includes Deans, Pro-Vice Chancellor etc). To promote the research culture in universities in Pakistan, Higher Education Commission (HEC) of Pakistan toke many steps, such as Higher Education Commission (HEC) of Pakistan offers thousands scholarships for PhD programmers at national and international levels, introduce Tenure Track System and provide research allowances as to motivate faculty members towards research (Khan and Jabeen, 2011). Hence, women participation in research activities still undermine in higher education institutions in Pakistan. Figure 2.7 highlights that female enrolment proportions is on decline at each higher degree level and wide gender gap persist that favor males at PhD degree level. This indicates that particular proportion of female drop out from Higher Education Institutions (HEIs) after to be a graduate. This is the major hurdle which prevents women to become visible in at senior

academic positions and significantly contribute in the field of research (such as research supervisor etc) in Higher Education Institutions (HEIs) in Pakistan. According to Syeda et al. (2006)and Qasmi (2009) pattern of gender role in Pakistani society and cultural constraints (such as early marriages etc) are the major issues responsible for female dropout rate at higher education level.

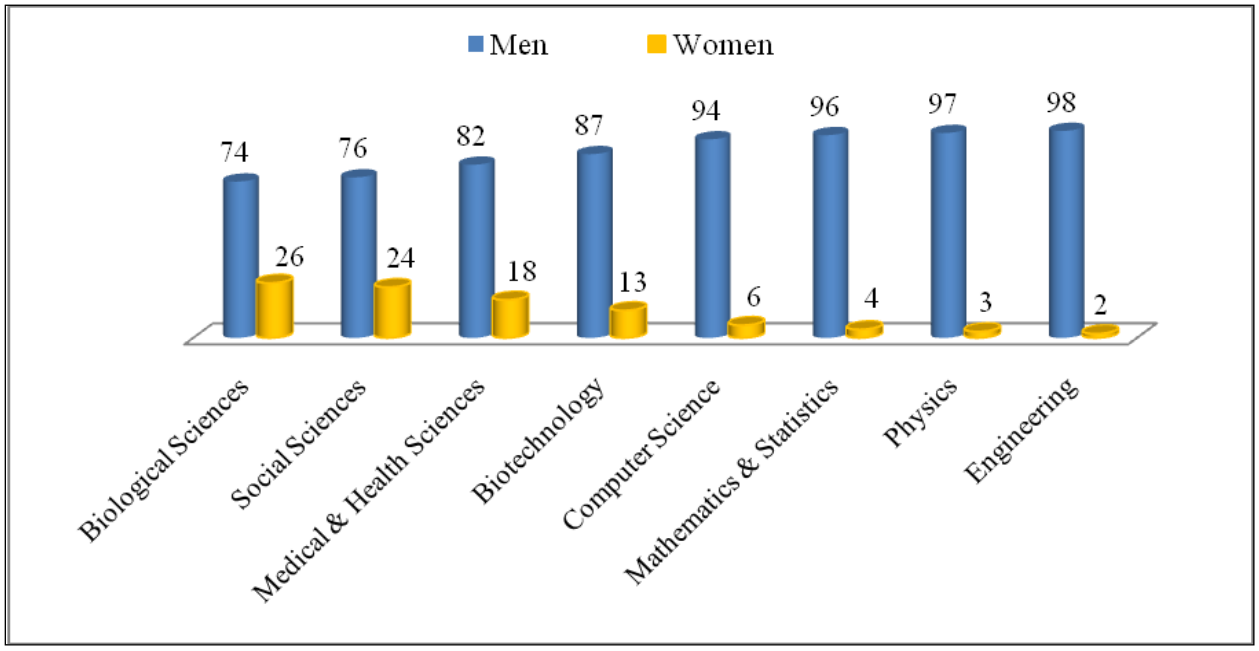
Figure-2.7: Male-Female Enrollment by Degree Level in Pakistan (%)



Source: Higher Education Commission (HEC) of Pakistan Official Website, Statistical Information Unit

Figure 2.8 shows gender representation as Higher Education Commission (HEC) of Pakistan approved research supervisors in Higher Education Institutions (HEIs) in Pakistan. The proportion of women as research supervisors in biological sciences (i.e. 26), in social sciences (i.e. 24 percent) and in medical & health sciences (i.e. 18 percent) indicate that women not equally contributing in research activities even in their own traditional fields.

Figure-2.8: Men-Women Research Supervisors by Discipline in HEIs of Pakistan (%)



Source: Higher Education Commission of Pakistan (HEC) Official website

Furthermore, in male dominating fields (i.e. engineering, physics, mathematics-statistics and in computer women contribution as research supervisor[15] is very poor. Women less in proportion as faculty, less in proportion as PhDs and female faculty also unevenly found by disciplines (as discussed above) therefore, proportion of women as research supervisors is low and lowest in male dominating fields.

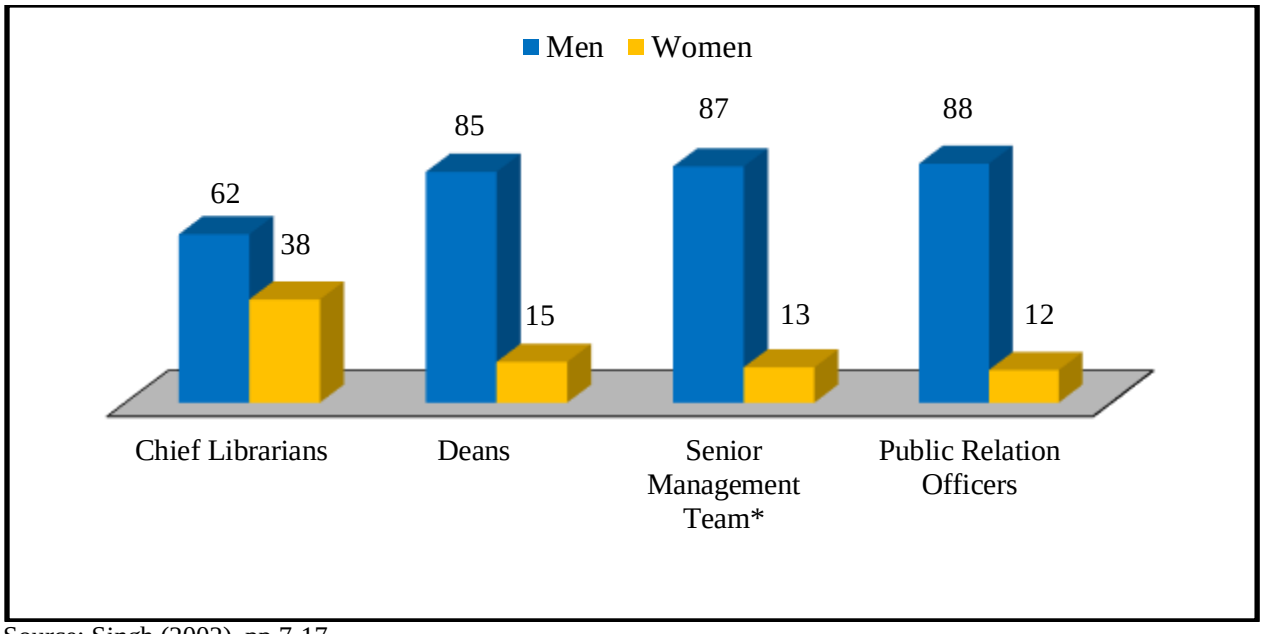
2.4.6 Women at Management Cadre in Higher Education Institutions (HEIs) of Pakistan

The economic prosperity of nations depends on effective and efficient utilization of human resource but educated women as active and efficient human resource not fully utilized during last decades in universities/degree awarding institutions in Pakistan (United Nations Educational, Scientific and Cultural Organization, 2010).

[15]Research supervisors are responsible as to guide their students on a regular basis for their academic research degree such as for Ph.D or M.Phil etc.

According to Singh (2002) women poorly participated at management cadre in Higher Education Institutions (HEIs) and their representations are poorest at financial management positions in all common wealth universities including Pakistan. Higher Education Commission of Pakistan and Federal Bureau of Statistics of Pakistan put out a variety of statistics on higher education in Pakistan but there are hardly any data on the gender composition in higher education management is available. Secondary data[16] that can be assembled presented in this study. Figures 2.9 presents gender representation in universities of Pakistan at senior management positions. Data reveals that in universities in Pakistan up to some extend women made up their contribution at senior management positions.

Figure-2.9: Men-Women Representation at Senior Management Positions in 22 Universities of Pakistan n = 107 (%)



Source: Singh (2002), pp.7-17
*Registrars/Secretary

[16]The statistical material which already in existence and not originated by the investigator himself, generally taken from newspapers, magazines, bulletins, reports, journals etc.

Whereas, there are many qualitative and quantitative hurdles(this includes female faculty contribution in research, cultural norms, work-life balance, females' preferred field of study etc)suppose to be responsible for limited women participation at management cadre in Higher Education Institutions (HEIs) in Pakistan.

To sum up, Higher Education Institutions (HEIs) play an important role to create opportunities for equitable employment and to remove the disparities in power and status (Isani& Virk, 2003). Highly educated women can play productive role to ensure sustainability of economic growth rate, but educated female are still long a way away from equal participation with men in many fields such as in higher education institutions. Globally since 1970 positive trends in tertiary education in relation to female has been observed. Today at tertiary level female students are much more or close to men. But female proportion decrease from lower to higher degree level (i.e. from Bachelor to Doctorate) and female remain strikingly low in science and technology whereas, clustering of women are found in the traditional female studies. Over past decades gender distribution of academic staff into Higher Education Institutions (HEIs) also experiencing a positive change but still there is a decline in the representation of women from junior to senior academic positions not only in Pakistan also across the world, this trend in more prominent in male dominating professional higher education institutions like engineering. In universities active participation of faculty members in research activities correlated with their professional career advancement but female faculty cited with lack of a strong research record. In this connection it is stated that women are more focus on job satisfaction than promotion. In higher education management women improved their relative positions but male culture still prevails in higher education sector. This indicates that there are several obstacles prevent women to break the glass ceiling[17] and to enter at higher administrative positions not only in Pakistan also in other developed and underdeveloped countries of the world.

[17]Glass ceiling is an unofficially acknowledged barrier to advancement in a profession that prevents women or minorities from obtaining upper-level positions.

In this connection it is stated that the growing female representation in higher education has less of an impact in the labor market or yet not translates into proportional representation at the academic, leadership and decision-making positions in Higher Education Institutions (HEIs) in many countries of the world as well as in Pakistan.

2.5 Outcomes for Female Faculty Underrepresentation in HEIs in Pakistan

The major outcomes of previous study in this chapter with reference to women status in Higher Education Institutions (HEIs) in Pakistan are discussed as below.

2.5.1 Educational Status

Women equal representation at academic and management level in Higher Education Institutions (HEIs) can be achieved through enlarging the proportion of highly educated women (European Commission, 2009).However, female access at higher education level is also depends on other their enrolment and completion of other stages of education previous to higher education. The percentage of girls who complete secondary education determines or influences the proportion of girls accessing higher education whereas in this modern era there are many countries of the world in which girl's access to primary and secondary education remain an unsolved such as in Pakistan, Afghanistan, Ethiopia, Guinea, Mali, Niger, Yemen etc (United Nations Scientific and Cultural Organization Institute for Statistics, 2010). According to Economic Survey of Pakistan (2010-11) 55 percent Pakistani women remain illiterate (see chapter one). On other side in Pakistan girl's proportions that complete their primary and secondary education is not satisfactory, this keep away large proportion of the 18 to 23 years old female to reach at university level or to earn higher education degree. At higher education level in Pakistan female dropout rate is also considerably high. There are various factors suppose to be responsible for

female drop out at higher education level and limited their access into labor market level (United Nations, 2010). According to Chitrakar, (2009) in many communities of Pakistani society due to marriage girls leave their higher studies because in these communities girls marriage is suppose to be more important than their education. Female limited access at higher education level make them under represented at better employment positions. Gender Gap Report (2011) reported that among 125 countries of the world Pakistan stand at 124th regarding gender gap at legislator, senior official and manager positions (World Economic Forum, 2011, p.45). In this connection it is stated that in Pakistan, poor access of women population at higher degree level negatively affect women representation at academic and management cadre in Higher Education Institutions (HEIs) in Pakistan.

2.5.2 Traditional Subjects

Women engineers, scientist, professors, vice-chancellors, director of finance, doctors and auditor would also be beneficial for the economy of a country and also for women themselves because having more women at better employment positions enhance their economic contribution and upgrade their status in society (Bell, 2009).However female are poorly participated in non-traditional courses for women such as in finance, business, management, law, engineering and technology therefore, poorest women representation is observed both at academic and management cadre in male dominating professional Higher Education Institutions (HEIs) such as in engineering universities and comparatively better women representation is found in women traditional subject based institutions such as in medical universities(European Commission, 2010). The scarcity of female students in subjects related to finance and management is another hurdle which keep women status undermines particularly at financial management positions (i.e. director of finance etc) in Higher Education Institutions (HEIs). These trends are persists all over the world including Pakistan. In this connection it is stated that

enlarging women's access to all field including finance, engineering and technology is essential for women to equally participate with men at both academic and management cadre in traditional and nontraditional subject based Higher Education Institutions (HEIs) in Pakistan.

2.5.3 Domestic Responsibilities

Domestic tasks (i.e. making of family food, keeping the home clean and takes special care of children etc) suppose to be the women's responsibility either working women or house wife in many countries like Pakistan therefore, professional women have to balance the demands arising from family and work roles(Federal Ministry for Family Affairs, 2010). Farida (2010) found that working women particularly those who are married and having young children may be facing work-burnout and job disruptions. Therefore it is stated that the burden of non-professional roles (i.e. domestic and reproductive) limited working women's ability to perform multiple professional responsibilities in Higher Education Institutions (HEIs). In the public higher education sector all over the world, equal opportunities are available for professional women who seek career advancement but it may be quite difficult for them to utilize many of these opportunities without disturbing the delicate balance between their work and family (European Commission, 2010). On other side participation in the conferences, workshops and seminars is supposed to be the key methods within academic and management staff for developing and transferring intellectual thought and unofficial networks at national and international level. However, due to domestic roles women academic staff could not found time to attend conferences, workshops and seminars particularly at international level consequently their unofficial networks remain limited. Singh (2002) reported that childcare, family and domestics responsibilities leave little time for women to be socialized and led to their limited informal networks which effect their career advancement in Higher Education Institutions (HEIs)because often they were less informed about promotion criteria and other career advancement opportunities like workshops, conferences etc. According

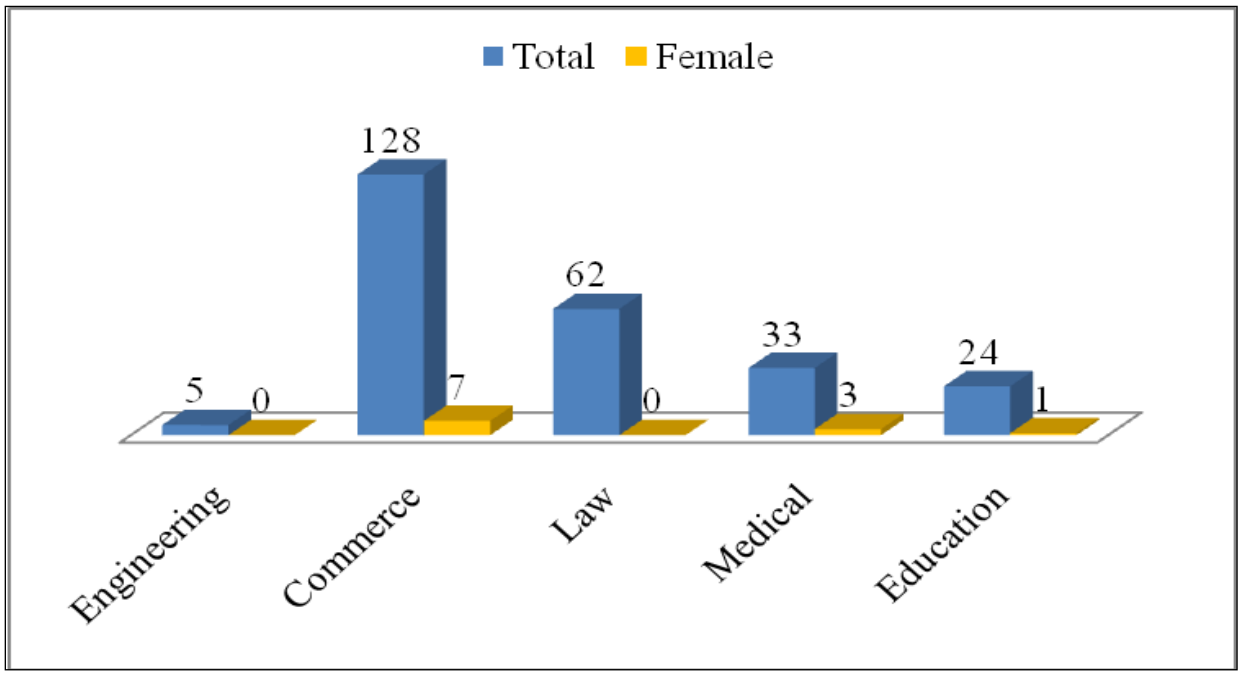
to Higher Education Commission (HEC) of Pakistan required criteria faculty promotions at senior academic level and at key decision making positions in universities are conditional with research performance (i.e. having PhD/specialization in related fields and publications in research journals). Female faculty can apply for timely promotions up to full professor level and able to equally participate side by side with men at key management positions within universities. But due to family responsibilities often female faculty could not found time for their qualification up gradation and research publications and stuck at junior academic positions such as lecturer. Family responsibilities also make women less geographical mobile. United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics, (2010) reported that in India women account for 27 percent of the mobile student whereas, in Pakistan women account only 16 percent of mobile students. Consequently women academic staff remains far in relation to received foreign degree for their research contribution (i.e. M.Phil, PhD etc).Therefore it is stated that due to domestic responsibilities women academic staff less motivated to actively take part in research consequently remain unequal to men at academic and management cadre in Higher Education Institutions (HEIs) in Pakistan.

2.5.4 Paucity of Women's Higher Education Institutions (HEIs)

The establishment of women's colleges and universities suppose to a step towards encouraging more women at academic and management cadre in Higher Education Institutions (HEIs) (Singh, 2002). A number of countries have encouraged the establishment of separate women's Higher Education Institutions (HEIs) and assume that these women universities are the important tool for enhancing female access at territory level as well as providing opportunities for women to be appointed at leadership positions (Iqbal et al., 2014). In a gender segregated society of Pakistan establishment of separate women Higher Education Institutions (HEIs) can play integral role to improve female enrolment at higher education level and upgrade women's undermine academic

and management status in Higher Education Institutions (HEIs). However, figure 2.10 highlights that country Pakistan has insufficient numbers of women's professional colleges. According to Higher Education Commission (HEC) of Pakistan Official Website country established its first women's university in year 1998 whereas, until 2010 Pakistan had only six Higher Education Commission (HEC) recognized women universities/degree awarding institutions (i.e. only one in private sector and five in public sector).

Figure-2.10: Separate Professional Colleges for Women in Pakistan (Numbers)



Source: Federal Bureau of Statistics of Pakistan (2011), p.124

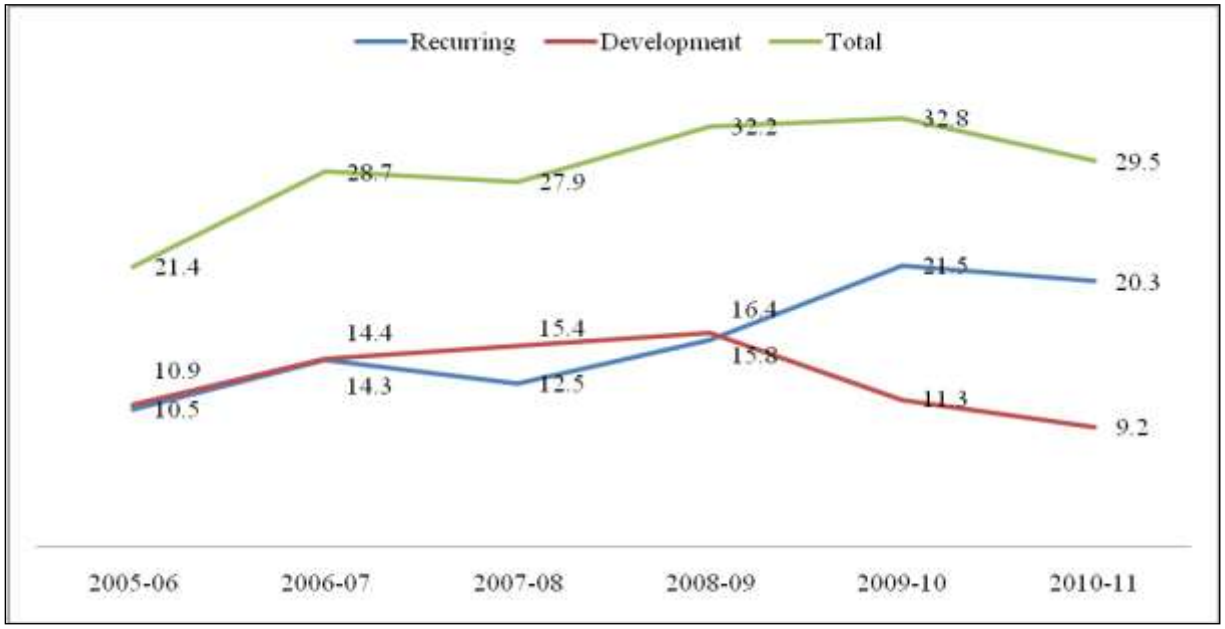
Therefore, it is stated that paucity of women's Higher Education Institutions (HEIs) is one of major hurdle that keep women as undermine factor at academic and management cadre in Higher Education Institutions (HEIs) in Pakistan.

2.5.5 Funding to Higher Education in Pakistan

Higher education is the key of advancement of country and economic prosperity of the nations (Isani & Virk, 2003). Large investment in higher education sector led to the expansion of research, establishment of women universities and professional colleges, favorable fee structure and scholarship/incentive programmes that encourage young females towards continuing higher education and participating same footing as men within academic and management cadre in Higher Education Institutions (HEIs). The government of Pakistan is committed to improving both the quality and the expansion of education through effective policy interventions and expenditure allocations (Saeed & Muhammad, 2011). Therefore government invest particular amount of money to maintain and upgrade the higher education. Since the inception of Higher Education Commission (HEC), the funding to higher education has immensely increased but country is facing financial constraints for the last few years, impact of financial crises has also been felt by higher education sector. According to Atta-Ur-Rehman (2011) beside to be atomic power in the world, Government of Pakistan give less importance to higher education sector and spend low amount of money. Although, after the establishment of Higher Education Commission (HEC) (i.e. in year 2002) country made tremendous success in higher education field but during last few years, after the deduction of higher education financial budget many Higher Education Commission (HEC) plans not progressed.

In figure 2.11 data indicative that due to continued financial vulnerabilities, the government has reduced development budget to Rs. 9.2 billion in 2010-11 compared to Rs.11.3 billion in 2009-10. It is observed that when the neighboring countries of Pakistan, including India, are doubling the funds for higher education, Pakistan is even slashing the higher education budget (Pervez, 2009).

Figure-2.11: Funding of Higher Education Sector in Pakistan (In Billion Rs)



Source: Economic Survey of Pakistan (2010-11), p.137

In this connection it is stated that Government of Pakistan has to make more serious efforts to strengthen women role in higher education sectors with more funding.

2.6 Conclusions

It is concluded that higher education is an effective source of women advancement and enables qualified women to work at decision making and leadership positions side by side with men. In Pakistan and all over the world at tertiary level female students improved their relative positions However; chapter found that women unequally participated at academic and management cadre in Pakistan like other countries of the world. These trends are more prominent in male dominating professional Higher Education Institutions (HEIs) such as engineering universities. With particular reference of Pakistan, unsatisfactory status of girls' education, cultural norms and

domestic responsibilities particularly during childrearing years negatively affect women representation at academic and management cadre in Higher Education Institutions (HEIs). In sex stereotyping society of Pakistan, establishment of separate women Higher Education Institutions (HEIs) can play integral role in order to promote job opportunities for women and their involvement and access into science and technology but paucity of women's universities, professional colleges and insufficient funding to education sector indicate that Government of Pakistan are not paying required attention to higher education sector particularly in relation to women. Therefore, chapter found that the low participation of women at teaching, research and management cadre in higher education institutions come from many directions such as from women themselves, from society, from institutions and from government.

Chapter Three

Research Methodology

3.1 Introduction

Chapter one explains unsatisfactory status of women education in Pakistan. Chapter two shows women unequally participated at academic and management cadre in Higher Education Institutions (HEIs) in many pockets of the world including in Pakistan. In this context chapter three presents research methodology that is adopted for this research study. ***"Methodology refers to the techniques and strategies employed within a discipline to manipulate data and acquired knowledge" (Fateh, 1998, pp97).***The purpose of this research is to examine the extent of balance in employment among male and female in Higher Education Institutions (HEIs) and to explore the major causes that limited women participation at academic and management cadre in Higher Education Institutions (HEIs). The Study used scientific methodologies to examine disparities and impedances between male and female in Higher Education Institutions (HEIs). Therefore, this chapter addressee goal of this research and strategies used to investigate the research problem. Chapter also discusses data collection methods and data analysis tools and highlights the methodological issues and limitations encountered by researcher.

3.2 Importance of Research Design

Research refers to the systematic investigation or the search for knowledge. Research can be defined as ***"something that people understand in order to find out the things in a systematic way, thereby increasing their knowledge" (Saunders et al., 2007, p.21).*** "***Research is the process of obtaining desired information and its analysis to arrive at some conclusions either***

for improving conditions considered unsatisfactory or explaining any phenomena" (Khan, 2007, p.1). A research study requires proper plan for all research activities adopted for investigation known as research design this includes type of study, universe, sampling procedure, data collection and analysis so on (Rajendra, 2008). Before conducting research on any problem researcher is required to work out a research design, which provides guideline for the collection of relevant evidence by researcher for The Study. The research design is the plan of research that is used to answer the research objectives; it is the structure or framework to solve a specific problem, gives direction and systematizes the research (Khan, 2007). Research design is a plan of action indicating the specific steps that are necessary to test the hypotheses and thereby achieve the research purpose that helps choose among the decision alternatives to solve the research problem (Chaudhury, 2012). Research design acts as a blue print for the conduct of the whole research study. It introduces efficiency in investigation and generates confidence in the final outcome of the study (Baloch, 2002). Research design avoids possible errors as regards research problem, information requirement and so on (Rajendra, 2008). Therefore it is stated that a researcher should not go ahead with his/her research unless the research design is planned properly. Good research design will anticipate competing explanations before collecting data so that relevant information for evaluating the relative merits of these competing explanations is obtained (Chaudhury, 2012).

The Study envisages multiple objectives; therefore research design has been tailored to achieve those objectives nature. This three dimensional research study (i.e. women role in teaching, management and research) demands proper research design as an efficient method for systematically collecting multiple data from a broad spectrum of individuals and provides depth examination of research problem. Therefore, carefully designed research plan for The Study gives proper direction and time-table to research activity, keeps adequate check on the research work, ensures its completion within certain time limit, keeps the whole research on the right

track and makes the whole research process compact and result-oriented. According to Bryman and Bell (2007) survey research most often used in social sciences as an important part of research design used to evaluate women's role in higher education institutions (HEIs) in Pakistan. Data collection is another integral part of research design, nature of this research study demands both primary and secondary data therefore, researcher collect the data through responses to questionnaire, focused group interview[18] (structured or loosely structured), observation, analysis of documents and unobtrusive methods[19].

3.3 Rationale

Chapter one shows that education has large benefits in general and for female in particular. It also explains that education play major role towards uplifting of society and its qualitative contributions in economic prosperity. Women comprise 48 percent of the total population in Pakistan and highly educated women can play productive role to ensure sustainability of economic growth rate in country (Economic Survey of Pakistan, 2010-2011). However, in Pakistan women seldom have equitable access to education consequently, 55 percent female population remain illiterate and only 3 percent of 18 to 23 years old females have access at higher education level. There are various structured and unstructured factors contribute to disparities in women education in Pakistan (see chapter one). Due to lack of education women infrequently have equitable access to employment in both public and private sectors. Higher Education Institutions (HEIs) can play an important role to create opportunities for equitable employment and to remove the disparities in power and status however; Higher Education Institutions (HEIs) also face male-female disparities that favor males (see chapter two).

[18]Focused Group Interview involves organized discussion with a selected group of individuals to gain information.
[19]Unobtrusive methods are the additional tool of making observations without the knowledge of those being observed.

Therefore, in The Study researcher is looking at women participation in Public Higher Education Institutions (PHEIs) in Sindh, Pakistan in the shape of their involvement in teaching, management and research.

It is supposedly that women are not able to manage crises situation and they lack of decision making power therefore, poorly represented at decision making positions (Lizzarage, 2007) Other school of thought believes that the women under representation at decision making positions is just because of their limited access to higher education, stresses of dual family and professional roles, cultural norms, career interruptions and lack of efficiency in policies and legislation to ensure the women participation (Shah, 1999; Eagly & Carli, 2003; Syeda et al., 2006 & Hasan & Othman 2012). Therefore, in The Study researcher is looking at women representation in handling the demanding situations that required instant decision making along with capacities to take decisions for the betterment of the institutions that they represent. The study also examines women's research capacities, reviews motivational factors and personality traits as to find out their personality characteristics that required for handling organizational situations. Because women will certainly not accede to leadership or decision making positions in Higher Education Institutions (HEIs) or in society in greater numbers until those issues which are responsible for keep women as undermine factor at management position will not address.

The Study enumerate the women participation at university level because, it is particular importance for strengthen women's role to participate at all key posts in Higher Education Institution (HEIs), which make policy effective and enhance their contribution in social development in general. At university level, increasing appointment of women from top to lower management positions indicates positive and effective change to the power sharing which is essential for increasing the male-female equality in Higher Education Institutions (HEIs). Women participation at leadership positions play vital role, as role model for other female staff,

on the other side it is necessary for improving their self image and perceptions. Higher Education Institutions (HEIs) can also avail the women's potential and their abilities to influence and develop the direction of the institution. The findings are relevant in understanding the culture of Higher Education Institutions (HEIs) and place of women in those institutions. This is important for future policy planning at public institutions. The Study can play vital role in order to develop and utilize human resource with special focus on women, so that they could make their full contribution towards socio-economic development of a nation.

It explained that such studies have never been confined out particularly in the context of Higher Education Institutions (HEIs) in Sindh or else in Pakistan. Most of the studies have been conducted in the shape of consultant and annual reports produce by Higher Education Institutions (HEIs). Therefore three institutions from Sindh province selected for case study. This research study will certainly be useful to all national and international development agencies, higher education sector organizations, associations and networks as well as public and private Higher Education Institutions (HEIs), which seek to address the problem of women poor participation in universities especially at academic, and management levels. The Study contains a wide range of experiences bring benefits to both women and their institutions. With the help of The Study women can improve their management qualities and their career prospects, while Higher Education Institutions (HEIs) can achieve better staff satisfaction, retention, and capacity, similarly be able to promote the principle of male-female equity in higher education sector.

3.4 Objectives

- The overall objective of The Study is to find out male-female imbalance in employment in public higher education sector and to address and asses all major issues concerned to underutilization of educated women in Higher Education Institutions in Sindh, Pakistan.

Whereas, specific objectives given as following:

1. To assess performance of education sector in Pakistan, especially in relation to women participation at academic and management cadre in higher education institutions in Sindh, Pakistan.

2. To examine education levels, experience and self-motivation of women working at middle and top management levels in managing university in Sindh.

3. To analyze women's personality traits in relation to their job performance in universities in Sindh.

4. To gather data on women involvement in functioning of universities in Sindh.

5. To provide comprehensive policy recommendations towards improving women participation in managing higher education institution in teaching, research and at management levels.

3.5 Hypotheses

1. Women participation in teaching and high management level is not significantly high as compared to males in the universities in Sindh.

2. The qualification, experience and self-motivation significantly undermine the role of women at middle and top management levels in universities in Sindh.

3. Women's personality traits do not affect their job performance in universities in Sindh.

4. Women actively involve in functioning of universities in Sindh.

3.6 Study Parameters

It is mentioned that performance of education sector in Pakistan has multiple dimensions such as the mindsets, policy, customs and traditions. The study evaluates the performance of education sector in relation to female participation in terms of their enrolment at higher education level along with their performance in coping out research, teaching and their involvement at management level. Therefore, in table 3.1 both qualitative and quantitative parameters have been listed accordance with study objectives.

Table-3.1: Quantifiable Parameters, Data Collection Methods and Analytical Tools for Study Objectives

Objectives	Quantifiable Parameters	Data Collection Methods	Analytical Tools
To assess performance of education sector in Pakistan, especially in relation to women participation at academic and management cadre in Higher Education Institutions in Sindh, Pakistan.	literacy rate, enrolment trends, physical facilities in schools, separate educational institutions for female, ratio of female teaching staff, state constitution, plans & policies, men-women participation in teaching, management and research (this includes academic responsibilities, post graduate research supervisors, post graduate foreign degree, research publications, attended conferences and paper presented in seminars at national and international level)	Survey data & secondary sources	Tabulation, diagrams, ratio & simple linear regression
To examine education levels, experience and self-motivation of women working at middle and top management levels in managing university in Sindh.	administrative status, educational qualification, years of experience, numbers of organized conferences, age, domestic responsibilities, marital status, work environment	Survey data	Tabulation, diagrams, ratio, minimum value, maximum value, average, mode standard deviation & logistic regression
To analyze women's personality traits in relation to their job performance in universities in Sindh.	tendency of openness and close, tendency of extraversion and introversion, tendency of neuroticism & emotional stability, tendency of agreeableness & antagonism, numbers of research publications, organized conferences, number of classes taken by sample women	Survey data	Tabulation, diagrams, ratio logistic and linear regression
To gather data on women involvement in functioning of universities in Sindh.	training, goal setting abilities & analytical skills, time devotion for job, tendency of conscientiousness & less-conscientiousness	Survey data	Tabulation, diagrams, ratio, minimum value, maximum value, mode, average & standard deviation

- HEIs stand for Higher Education Institutions

3.7 Regression Technique

Regression is a statistical technique used for prediction (James and Mark, 2010). In The Study for predicting the trends related to women participation in Higher Education Institutions (HEIs) two regression models were used as following.

3.7.1 Simple Linear Regression

A simple linear regression presents the mathematical relationship between two quantitative variables, where dependent variable used to predict by using only one independent variable (Christopher, 2011). The Study used simple regression for predicting women participation at academic cadre in Higher Education Institutions (HEIs) because both dependent (i.e. Y = numbers female teachers at university level) and independent variables (i.e. X_1 = Years) were quantitative. In simple regression model R square shows the variation in dependent variable explained by independent variable and b coefficients also known as slope which indicate the average change in dependent variable associated with one unit change in independent variable (Jeffrey, 2012).Whereas, b_0 is the average value or expected value of dependent variable if all of the independent variables are zero and significant value of t-statistics indicates that the independent variable has significant impact on predicting dependent variable (Gujarati, 2003). Variable a big absolute t- value suggests that a predictor variable is having a large impact on the criterion variable (Gujarati, 1995). The F-test estimates the statistical significance of the regression equation (Verbeek, 2004). In The Study F-statistic is used to analyze the usefulness of this equation for predicting women participation at academic cadre in Higher Education Institutions (HEIs).

3.7.2 Logistic Regression

Logistic regression is highly effective for estimating probability (O'Connell, 2005). Logistic regression analysis allows one to predict probability of a binary dependent variable from a set of independent variables that may be quantitative or qualitative (Christopher, 2011). Logistic regression method is a powerful technique because it is relatively free of restrictions and it allows analyzing a mix of all types of predictors (James and Mark, 2010). In this case study researcher focused to indentify the factors that correlated with women participation at top and middle management levels and make predictions. Therefore logistic regression was applied to primary data because selected independent variable is binary[20] and selected independent/predictor variables (i.e. qualification, experience and self motivation) are mixed (i.e. both qualitative[21] and quantitative[22]).

The Minus 2 Log Likelihood for a model indicates the extent to which the model fails to perfectly predict the values of the dependent variable (Jeffrey, 2012). In this model value of Minus 2 Log Likelihood is smaller indicates goodness of the model. In logistic regression model interpretation of R^2 and b_0 is same as in simple regression model (i.e. discussed above). However, the standard way of interpreting beta coefficients (i.e. b) in logistic regression is using the conversion of it to an odds ratio using the corresponding exp (b) value (Pampel, 2000). Exp (b) is the odds ratios for the predictors and Odds ratio is the probability of winning over the probability of losing (Menard, 2002). If Exp (b) is greater than 1 then the odds of experiencing the characteristic of interest is greater per unit increase in the predictor variable on other side, if Exp (b) is less than 1 then the odds of experiencing the characteristic of interest is lower per unit increase in the predictor variable (Pampel, 2000).

[20]Binary or dichotomous variables have only two categories or levels and take only two possible values, 0 and 1.
[21]Qualitative variables are those variables which can be measured in numbers.
[22] Quantitative variables are those variables which cannot be measured in numbers.

Therefore in The Study for logistic regression model Exp (b) used to predict the probability for women to be involved in management activities on the bases of selected independent variables. In logistic regression higher R^2 value (i.e. near to 1) indicating greater model fit but Cox and Snell R^2 cannot reach the maximum value of 1 even for a perfect model therefore, Nagelkerke's used to measure the full 0-1 range (Pampel, 2000). According to James and Mark (2010) standard errors more than 2.0 indicate numerical problem (expect constant). In presented model values of standard errors for all independent variables (i.e. qualification, experience and numbers of conferences organized by women) are not excessively large therefore there is no indication of numerical problem in this logistic regression model. The Wald Statistic is just the square of the ratio of the coefficient to its standard error and used to assess the significance of coefficients in the model (Christopher, 2011). In The Study Wald statistic is used to assess the significance of coefficients in the model (Christopher, 2011).

3.8 Hypotheses, Outcome and Methodological Details

Hypothesis 1: Women participation in teaching and high management level is not significantly high as compared to males in the universities in Sindh.

There are parameters includes literacy rate, enrolment trends, physical facilities in schools, separate educational institutions for female, ratio of female teaching staff, state constitution, plans & policies, women participation in teaching, management and research (this includes academic responsibilities, post graduate research supervisors, post graduate foreign degree, research publications, attended conferences and paper presented in seminars at national and international level) in Higher Education Institutions (HEIs) were selected in order to test the hypothesis 1. Primary and secondary data was collected as to gather information in relation to women role at academic and management levels in Higher Education Institutions (HEIs) in

Sindh, Pakistan. Analytical tools including minimum value, maximum value, average, standard deviation, tabulation, diagrams, ratio, frequency and simple linear regression were applied on data. Trends indicates that female academic status in higher education institution in Pakistan has been positively improved, but still female faculty representation is on the decline from junior to senior academic positions. These trends are more prominent in male dominating professional higher education institutions such as engineering universities. Unsatisfactory status of girls' education, cultural norms and multiple family responsibilities suppose to be the responsible for unequal male-female distribution at academic cadre into Higher Education Institutions (HEIs) in Pakistan as well as in Sindh. Primary and secondary data confirmed that women participation at management cadre in Higher Education Institutions (HEIs) in Pakistan is low particularly at higher administrative positions (i.e. Vice-Chancellor, Pro-Vice Chancellor etc). The poor state of indicators confirmed the validity of hypothesis therefore; hypothesis 1 is accepted.

Hypothesis-2: The qualification, experience and self-motivation significantly undermine the role of women at middle and top management levels in universities in Sindh.

There are parameters includes administrative status, educational qualification, years of experience, numbers of organized conferences, age, domestic roles, marital status and work environment were selected in order to test the hypothesis 2. To indentify the factors that correlated with women participation at top and middle management levels and make predictions primary data was collected. Analytical tools including minimum value, maximum value, average, mode, standard deviation, tabulation, diagrams, ratio & logistic regression were used to analyze and present the data. Empirical analysis confirmed that qualifications, experience and self-motivation to perform multiple responsibilities have significant impact on women representation at management cadre but sample women were short of these qualities therefore,

underrepresented at middle and top management levels in universities in Sindh. In the context of outcome hypothesis 2 is accepted.

Hypothesis-3: Women's personality traits do not affect their job performance in universities in Sindh.

There are parameters includes tendency of openness and close, tendency of extraversion and introversion, tendency of neuroticism & emotional stability, tendency of agreeableness & antagonism, numbers of research publications, organized conferences, number of classes taken by women were selected in order to test the hypothesis 3. Primary data was collected, analytical tools including tabulation, diagrams, ratio logistic and linear regression was used to analyze the data. It is found that women's reserved personality and weak nerves are the negative aspects of their personalities that keep women as undermine factor at management cadre in universities in Sindh. Women scoring high in openness to experience therefore they like to get in teaching, rather than, management activities. Sample women were trustworthy but their extremely agreeable nature is not suitable for key decision making position. In the context of study results hypothesis 3 is rejected.

Hypothesis-4: Women actively involve in functioning of universities in Sindh.

There are parameters includes training, goal setting abilities & analytical skills, time devotion for job, tendency of conscientiousness & less-conscientiousness were selected in order to test the hypothesis 4. Primary data was collected to analyze women involvement in Higher Education Institutions (HEIs). Analytical tools including tabulation, diagrams, ratio, minimum value, maximum value, average, mode, average and standard deviation were used to analyze and present the data. Study results confirmed that sample women actively involved in professional skills development, they are dutiful and posses management abilities. On other side due to

domestic responsibilities sample women could not agree to devote long hours at job and for qualification up gradation and research activities. On the bases of mix pattern of study results hypothesis 4 is accepted.

3.9 Study Universe

Study universe refers to ***"the targeted population being studied" (Khan, 2007, p.164).*** A research population is generally a large collection of individuals or objects that is the main focus of a research (Anderson et al., 1993). In any research study it is important to have a precise description of the population of elements that is to form the focus of the study (Rajendra, 2008). Pakistan is a developing country and access to education and employment is still major problem of the country (see chapter one). In Pakistan unequal male-female representation can be observed in many public and private sectors of economy, same as in public higher education sector (see chapter two). The situation of education and employment in Sindh province is not different from other regions of country (Economic Survey of Pakistan 2008-09). Therefore, in broad sense study area comprise in term of all Higher Education Institutions (HEIs) of Pakistan as to find out facts and figures and the future pathways towards full male-female equality in higher education sector in Pakistan with special focus on Sindh province. In public and private sector there are various Higher Education Commission (HEC) recognized professional and general higher education institutions imparting higher education in Pakistan.

Table 3.2 enumerates the total numbers of Universities/Degree Awarding Institutions (DAIs) in Pakistan in term of regions and shows that Sindh province occupies a major proportion of public higher education institutions (i.e. 14). On the bases of governance system, Higher Education Institutions (HEIs) in public sector selected for study. Therefore, the population of The Study

was consisted of all fourteen Higher Education Institutions (HEIs) in public sector in Sindh and their all women academic and management gazetted staff (i.e. BPS- 17 & above).

Table-3.2: Public and Private Universities in Pakistan by Region (In Numbers)

Region	Public	Private	Total Universities/Degree Awarding Institutions (DAIs)
Punjab	22	18	40
Sindh	14	25	39
Khyber-Pakhtunkhwa	15	9	24
Balochistan	6	2	8
Federal Areas	13	3	16
AJK	2	2	4
Northern Areas	1	_	1
Total	73	59	132

Source: http://www.hec.gov.pk/ourinstitutes/pages/default.aspx

3.10 Study Sample

Sampling can defined as selecting part of the elements in a population to represent and to estimate the characteristics of whole population and sampling design is a methodological procedure that researcher uses to study in which the data is collected (Chaudhury, 2012). Sampling technique is economical, practical and faster in addition, yields more accurate and comprehensive information (Baloch, 2002). The sample survey makes possible for the researcher to learn much larger and much more varied about large population within limited resources in order to make a complete enumeration (Anderson et al., 1993). The study area of this research

(i.e. all public higher education institutions in Pakistan with special focus on Sindh) large and geographically scattered therefore, study of all Public Higher Education Institutions (PHEIs) could result in considerable expenditure of time, money and effort. Therefore sampling was needed as to enables researcher to collect and closely examine the data within a specific context (i.e. women's role in higher education institutions) and to make inferences about the whole population.

Two general approaches for sampling are used in social science research that is probability sampling in which all elements in the population have some opportunity of being included in the sample (Baloch, 2002). In contrast, in non-probability sampling in which population elements are selected on the basis of their availability or researcher's personal judgment (i.e. knowledge about the topic) that they are representative (Bryman, 2007). Purposive sampling also known as judgmental, selective or subjective sampling, it is a type of non-probability sampling technique (Saunders et al, 2007). Purposive sampling is especially exemplified through the key informant technique (Bernard, 2002). Purposive sampling may usually be the more accurate way if researcher is looking for a very rare or much sought for a particular research study (Chaudhury, 2012). On the bases of review literature in the context of this research study and the nature of research objectives, purposeful sampling technique expected to be more accurate than an alternative form of sampling. In addition, because of accessibility, limited time and finance researcher wants to choose a particular subset of Higher education Institutions (HEIs) whereas, selection of institutions of population by random-sampling for the study suppose to be less suitable. Therefore, a group of universities specially picked through purposive sampling technique to collect data from the survey and to generalize findings for this research study.

3.11 Sample Size

Sample size refers to the total numbers of selected elements for data collection as representative [16] of a population (Anderson et al., 1993). In a research study there are some factors that affect the sample size such as available resources, study time and study objectives (Khan, 2007). If the sample size is too small, even a well conducted study may fail to answer its research question, may fail to detect important effects or associations, or may estimate those effects or associations too imprecisely (Bernard, 2002). Similarly, if the sample size is too large, the study will be more difficult and costly, and may even lead to a loss in accuracy, effort, research money and yields statistically inconclusive results (Bernard, 2002). Therefore, it is argued that more accurate, sample size must be chosen such that resources and time can be well managed and that will yield interpretable results and minimizes research waste. It is also argued that in conducting a survey research, it is more important to obtain a representative sample than sample size (Chaudhury, 2012). Table 3.3 presents study area for this research study.

Table-3.3: Study Area

Total Public Universities in Pakistan	Public Universities in Sindh	Selected Sample Public Universities
73	14	➢ University of Sindh, (UOS) Jamshoro ➢ Liaquat University of Medical Health Sciences (LUMHS), Jamshoro ➢ Mehran University of Engineering & Technology (MUET), Jamshoro,

Source: Pakistan Education Statistics (2010-11)

The selection of the sample universities of this research to ensure that representation in term of degree awarded by the institutions be included. The selected universities are 22 percent of total public universities in Sindh. It is mentioned that under any statistical methodology the sample size is justifiable to make statistical inferences for generalization purpose (Baloch, 2002). For this research study limited resources including period of time (i.e. up to four years) provided to researcher in order to complete PhD research work. This is multi-dimensional study (i.e. women participation in teaching, management and research in Higher education Institutions (HEIs) plus indirectly associated with women's personal characteristics and their domestic life) therefore, representative [23] sample size 22 percent of population suppose to be sufficient for this case study.

Table-3.4: Categories of Sample Respondents and Criteria for Selection

Categories	Criteria for Selection of Sample Respondents
Teaching	Women in all teaching categories, (such as professor, associate professors, assistant professors and lecturers), BPS -17 and above.
Management	Women working at top and middle management levels (i.e. BPS 17 and above).
Research	Women having postgraduate degree/registered for postgraduate degree in the field of research/having publication(s)/ post graduate research supervisors.

Table 3.4 explains categories and criteria for selection of sample women. In order to achieve multiple research objectives in systematic way respondents were categorized into three different categories (i.e. teaching, management and research).

[23]Representative is a person or thing that represents another or others.

Table 3.5 highlights selected sample respondents which were randomly selected within their related categories. There are different approaches used to determining the sample size such as table and formulas (Glenn, 2013). In this research study sample size is calculated through Raosoft sample size calculator. The sample size is appropriate at ± 8% error rate, confidence level is 95% and 5 % level of significance.

Table-3.5: Selected Sample Respondents

Sample Universities	Total Population	Sample Respondents in Numbers	Sample Respondents in Percent
University of Sindh, (UOS) Jamshoro	163	48	30
Liaquat University of Medical Health Sciences (LUMHS), Jamshoro	83	30	36
Mehran University of Engineering & Technology (MUET), Jamshoro,	56	20	36
Total	302	98	33

Source: Registrar Office Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro (UOS), 2011-12

- Because of complications, teaching, management and research categories cannot be sorted out individually as there are numerous cases appointed as teaching faculty, taking management responsibilities and research activities, for example a faculty member holding the charge of dean/chairperson and perform research activities (i.e. research supervisor etc).

3.12 Criterion for Selection

Researcher is living in Sindh province of Pakistan, because of this, selection of any other province of the country (besides Sindh) such as Punjab, Balochistan or Khyber- Pakhtunkhwa create various problems for me like problem of accommodation and unfamiliarity with environment, that could be effect the quality of my research work. Therefore, for getting the best quality research work, Sindh province (which was not explored before at academic level) selected for research study. In Pakistan, private higher education sector imparting higher education into the various fields of studies such Engineering, Medical, Information Technology, Business Studies etc in all four provinces but almost all of private Higher education Institutions (HEIs) are operating in big urban areas, these are unequal opportunity institutions where poor section of society will always remain underrepresented because private institutions charge exorbitant cost of higher education. These institutions provide better working facilities and pay handsome salary amount to their staff, which could be effect the performance of their academic and management staff. For example in public sector university an Assistant Professor (BPS 19) is earning around seventy to eighty thousand rupees with all allowances, in contrast, in private sector an Assistant Professor can received around one lack rupees per month (having foreign PhD degree gives more financial benefits to him/her, around 150,000 rupees salary package). Furthermore, in private Higher Education Institutions (HEIs) salary package also vary from faculty to faculty, for example at same BPS and designation Faculty of Science and Technology received more pay than Faculty of Arts. Therefore this research study was limited to public higher education sector. The broad network of constituent and affiliated colleges, and sub campuses of Public Higher education Institutions (PHEIs) play positive role in order to enhance the people's accessibility at higher education level into various regions with in the country. However, limited time and resources for research study, difficulty in accessibility to all types of institutions and their different management and governance system create strong boundaries

around study area. Therefore the case study only concerned with main campuses of public higher education institutions (universities/degree awarding institutions).

I am (i.e. researcher) working in University of Sindh Jamshoro, and I have more access to reach these Higher Education Institutions (i.e. in Mehran University of Engineering & Technology (MUET), Jamshoro, University of Sindh, Jamshoro and Liaquat University of Medical Health Sciences (LUMHS), Jamshoro) for collection of primary data. I am (researcher) familiar with these institutions which save my time and cost of research. Familiarity with these institutions enhances me for quality research work and I selected these universities (Mehran University of Engineering & Technology (MUET), Jamshoro, University of Sindh, Jamshoro and Liaquat University of Medical Health Sciences (LUMHS), Jamshoro) for collection of primary data.

3.13 Significance of Sample Universities

The University of Sindh, Jamshoro is the second oldest university in Pakistan accredited by the Higher Education Commission of Pakistan (University of Sindh From Wikipedia, the free encyclopedia, 20014). This degrees awarding institution has remarkable contribution in meeting the demand for higher education of rural and urban areas of Sindh Province. University of Sindh, Jamshoro, play significant role to develop human resource by imparting quality education in fields of science, arts and technology. This non-professional/general institution offers various traditional courses for female such as education, social sciences and biology etc as well as non-traditional course for female such as management, commerce, statistics and information technology etc with particular female enrolment proportions. At academic and management cadre in University of Sindh, Jamshoro women are performing their duties at important positions. University of Sindh, Jamshoro plays vital role in order to develop research culture and female faculty play active role in research development side by side with men counterparts.

Therefore, selection of University of Sindh, Jamshoro helps to see women participation in general and special trends.

Liaquat University of Medical & Health Sciences, Jamshoro being the first professional public sector Medical University in Pakistan, recognized as well-known medical institution of the country (Official Website LUMHS, 2014). This medical university playing a leadership role in standardizing medical education in the country as well as promoting a culture of medical research and improving health care facilities with the aim to subsequently emerge as a centre of excellence in medical learning, research and quality care for patients. Liaquat University of Medical & Health Sciences, Jamshoro selected for this research study as to find out female representation at enrolment level and their multiple roles (i.e. in teaching, management and research) in medical university. Therefore, selection of Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro helps to see special trends of women participation in professional institution which is supposed to be traditional course based (i.e. medical) institution for women.

Mehran University of Engineering & Technology (MUET), Jamshoro is one of the professional leading public Higher Education Institution in Sindh province (MUET Official Website, 2014). This institution obtained ISO-9000 certification in the month of September, 2003(MUET Prospectus, 2013). Mehran University of Engineering & Technology gives priority to resuscitate research activities and meets the demand for qualified engineers and other professionals and to provide an opportunity of engineering education to both male and female.***"It is now recognized that only through technically advanced manpower can a nation achieve advancement in today's knowledge based economy" (Isani et al., 2003, p.190).*** Engineering suppose to be non-traditional course for female whereas, female self-interest in different non-traditional courses play vital role towards their participation at academic and management levels in Higher Education Institutions (HEIs). Therefore, in order to study the extent to which women

participated in production and promotion of technically advanced manpower, Mehran University of Engineering & Technology (MUET), Jamshoro selected for study.

On the bases of above stated criteria three sample universities (i.e. University of Sindh Jamshoro, Liaquat University of Medical Health Sciences and Mehran University of Engineering & Technology) were purposely selected as representative sample of population.

3.14 Data Collection Process

The data collection is an integral part of methodology, for this survey research both primary and secondary data collected in order to achieve multiple study objectives (i.e. women role in teaching, management and research). Secondary data collected from all secondary sources (this includes books, journals etc) and primary data was collected through interviews in formal questionnaires. Before developing the questionnaire, on the basis of detailed review literature, related researches and guidance of supervisor study variables were selected. In order to collect a wide range of useful information to achieve study objectives, researcher used these selected variables (this includes age, grade, qualification, research publications, personality traits etc) and carefully designed questionnaire with the help of research supervisor. In order to record absolute information unstructured questions (i.e. open-ended) were developed. Structured questions (i.e. close-ended) as multiple-choice also design to indicate the level of detail one expects the respondent to provide.

Constructed questionnaire was divided into five different sections. Part-I was designed to obtain information about selected demographic characteristics of respondents. Part-II was designed to collect information about teaching responsibilities of women faculty with the help of 7 items. Eight items were used in part III to evaluate the extent to which women faculty contributing in research. In part four, sets of statements were developed to examine the analytical skills, goal

setting abilities and personality traits, as response to statements women academic and management staff were instructed to rate themselves on five point Likert's scale. Finally part five was developed to investigate work environment, domestic role, additional responsibilities and time management abilities of women academic and management staff. We also had interviews that is recorded, these recoded interviews used to get required description.

According to Fateh (1998) pilot or pre-test a survey before initiating a full study is maximize the effectiveness of a survey. Therefore to determine the efficiency and appropriateness of research tool to the subject matter, pre- testing as crucial step was taken. Before doing on large scale initially developed questionnaire were tested on 15 members of women acdademic and management staff taken from University of Sindh, Jamshoro (UOS). In the light of pre-tested research tool few questions were modified, rearranged and some were added. Before data collection, official letter was obtained from research supervisor as to identify researcher identity and purpose. Researcher was meets with registrar of each sample university for obtaining permission for primary data collection from their related women academic and management staff, than approach to Dean/Head of the Department/Institute/Center of the sample universities in order to avail their cooperation and support in data collection. Registrars of Liaquat University of Medical & Health Sciences (LUMHS) and Dean Faculty of Electrical Electronics and Computer Engineering of Mehran University of Engineering and Technology (MUET) cooperate with resercher and assign a staff member with her for guidence and introductory meetings with respondents which facilitate the resercher to develop good rapport with respondents. Resercher working in University of Sindh, Jamshoro since last six years therefore, she had personal contacts with many respondents of this sample university, which facilitate me in data collection process. Researcher personally collected the whole data from all sample universities (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering and Technology (MUET) and University of Sindh, Jamshoro). Appointments were fixed according to

the convenient of respondents or their leisure time. In order to conduct proper information with proper concentration researcher approached to women respondents in their offices and informed them about the research topic and its purpose. The major difficulty was faced by the researcher in regard of respondents reported from Liaquat University of Medical & Health Sciences (LUMHS) who were also working in attached hospital because they had very busy work schedules. After many attempts it was possible to arrange meeting with them in order to conduct interview. The required number of filled questionnaires was achieved after many visits of sample universities. After the data collection each questionnaire is allocated a symbol which is known as code number as for systematic data entry.

3.15 Limitations

Limitations are those elements over which the researcher has no control during research process. Although this research was carefully prepared and researcher reached its aim but there was some unavoidable limitations. The foremost of which is to capture the women role into three dimensions (i.e. teaching, management and research) it is complex to sort out individually. Furthermore, in Liaquat University of Medical Health Sciences (LUMHS), Jamshoro women role becomes more complex as to capture and sort out because women academic staff beside teaching, management and research also involved in hospitals and medical camping activities for healthcare. Second limitation for the study methodology is the availability of updated data. Large bureaucratic organization like the bureau of statistics[24] and other government and private agencies were the major source of secondary data for this research study. Many of these organizations collect the data after years of intervals for example population censuses take place after every ten years interval. Therefore, the data from many published sources were not updated at the time during which researcher wants to use this statistics.

[24]The government agency produces economic data that reflects the state of the country economy.

Furthermore, very little statistical data is available and even less published about the status of women in higher education sector especially with reference to Pakistan. Scarcity of research funds is also another issue, during study process only 1000 rupees per month, for two years offered by University of Sindh, Jamshoro for faculty members as to pursue PhD research work which were not sufficient.

3.16 Universities Profile

The Profiles of sample public higher education institutions (i.e. University of Sindh, Jamshoro, Liaquat University of Medical Health Sciences (LUMHS), Jamshoro and Mehran University of Engineering & Technology (MUET), Jamshoro) has been discussed as below.

3.16.1 University of Sindh, Jamshoro

The University of Sindh, Jamshoro located in district Jamshoro, province of Sindh, Pakistan, it is about 18 kilometer away from Hyderabad on the right bank of river Indus (University of Sindh From Wikipedia, the free encyclopedia, 20014). The University of Sindh, Jamshoro has geared up all its resources to equip their students with knowledge and skills necessary to face the challenges of present century. The mission of University of Sindh, Jamsho is to develop human resources by imparting quality education in all fields of science, arts and technology and to develop a body of teachers and taught who would be aware and proud of their culture and possess a high sense of honor and integrity and work with selfness dedication, commitment and responsibility towards society to contribute to the prosperity of people, peace and harmony in the country.

There are presently 4 law colleges and 74 degree and post graduate colleges (including 16 private colleges) affiliated to the University of Sindh, Jamshoro around Hyderabad and all over Sindh. The university has two main campuses Allama I.I. Kazi Campus, Jamshoro, which is

named after the former Vice Chancellor of the University and Elsa Kazi Campus, Hyderabad, which is named after the late German wife of Allama I.I. Kazi, the former Vice Chancellor of the University. The university has established linkages with leading foreign universities (this includes University of Durham, University of Manchester, University of Sussex, University of Essex, University of Leicester, and University of Nottingham of United Kingdom) in order to promote research activities and male-female faculty development. University of Sindh, Jamshoro develops various development programs exclusively for female students and for female staff. There are separate hostels for girls and female staff within university premises provides residential facilities to girls' students and female faculty. Medical care and transport facilities exclusively for females are also available for students and staff members of the university. University of Sindh, Jamshoro awarding scholarships and also provide financial assistance to its female faculty members (this includes delivery expenses etc).

a) History

At the time of independence in 1947, the area constituted as the Sindh province came under the academic coverage of University of Bombay[25] which had now become a part of India (Isani & Virk, 2003). A formal academic centre was therefore needed for Sindh and under the constitutional act no. XVII of 1947 titled University of Sindh, a resolution was passed by the Legislative Assembly of Sindh thus giving birth to this new university in the country's capital of Karachi (Official Website, University of Sindh, Jamshoro, 2014). The act was subsequently revised and modified in 1961 and later. However, it was the act of 1972 that provided for greater autonomy and representation of teachers, under which the university currently functions. From 1947 to 1951 the University functioned solely as an examining body.

[25]University of Bombay is the oldest public university in India, founded by Dr. John Wilson in year 1857. The university was modeled on the universities in Britain. In 1996 university was renamed as University of Mumbai when the city of Bombay was renamed Mumbai.

However, after its relocation from Karachi to Hyderabad in 1951, it started functioning as a teaching university in pursuit of fulfilment of its charter and mission to disseminate knowledge. The first teaching department (i.e. department of education) rose to the status of faculty of education later, was started in view of the great dearth of trained teachers in the country. The departments of basic science disciplines as well as other departments on humanities side were added by mid fifties. With the departmentalized growth of the university's organizational structure, a better equipped campus was desired and a new campus was established in Jamshoro town in year 1955. Most of the teaching departments under the faculty of science shifted to this new campus in 1961. Later in 1970, the departments for arts and humanities were transferred to the new campus. The University of Sindh currently functions from its central administrative campus at Jamshoro. The academic march forward continued with the gradual addition of other teaching departments and now there are more than 40 full-fledged teaching institutes/centres/departments functioning under various academic faculties. Institute of biotechnology & genetic engineering and centre for environmental sciences are the latest addition which heralded a new era in scientific research in the country.

b) Programs of Studies

University of Sindh, offers graduate and post-graduate degrees programs and provides research guidance for post graduate research studies (this includes Master of Philosophy (M.Phil), Doctor of Philosophy (PhD) programs etc) without any male-female discrimination. The teaching and research under the faculties of natural sciences, social sciences, arts, education, Islamic studies, commerce and business administration is directly imparting by the university. The University of Sindh, jamshoro offers programs leading to the award of three years bachelors (honors) degree in various general and basic disciplines on humanities side while four years bachelor degree is offered under the faculty of natural sciences, commerce & business administration. Bachelor degree in pharmacy is of five years duration. The master’s degree programs are of one year

duration after honors and of two years duration after bachelor (pass) degrees. The students passing four years bachelor degree are enrolled directly for Master of Philosophy (M.Phil)/ Master of Science (M.Sc) research studies.

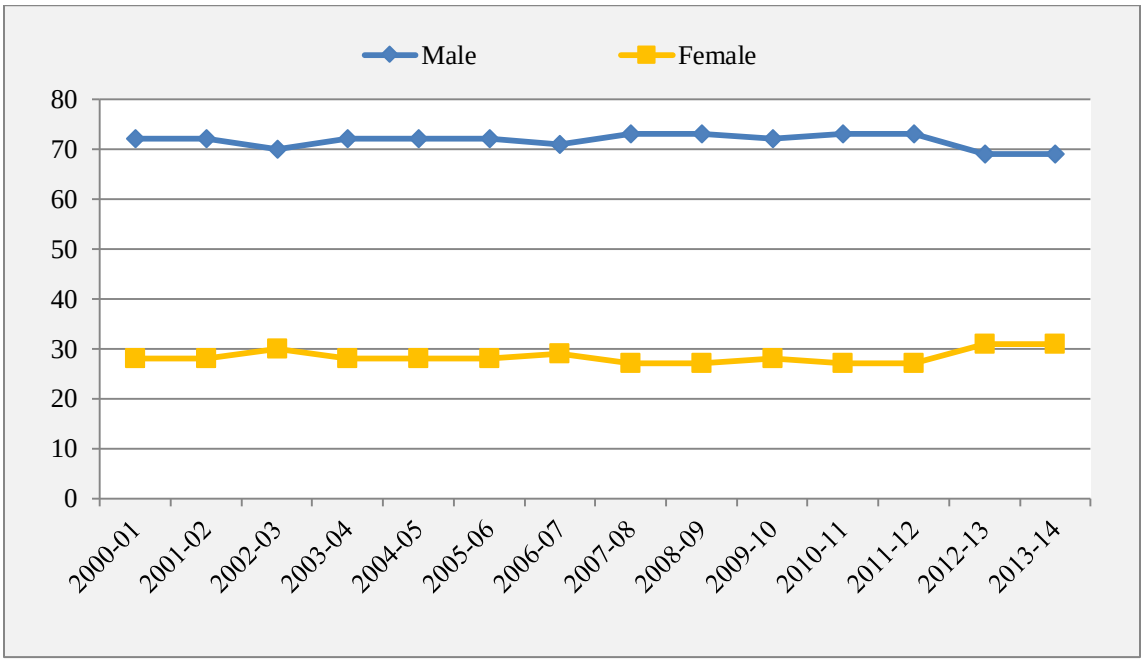
Degree programs in the evening shift introduced since 2001 include bachelor degree in chemistry, computer science and information technology etc. University also offers Masters Degrees in English, Telemedicine, E-commerce, Multimedia Technology, and Business Administration etc. Many teaching departments under various faculties of the university also offer postgraduate one year diploma as well as short term certificate programs. Female students also enrolled side by side with male fellows in evening degree programes.

c) Enrolment Trends

To fulfill obligation towards community and society at large University of Sindh, Jamshoro accommodate 18949 male and female students (Director of Admission and Registrar Office University of Sindh, 2013-14).

Figure 3.1 highlights that the enrolment rate is continuously in progress during last decades in university of Sindh, Jamshoro however, the female enrolment proportion in university of Sindh, Jamshoro is not fairly equal to men (i.e. 69 percent male and 31 percent female enrolled into various departments). This indicative that University of Sindh, Jamshoro much has to do for upgrading female enrolment proportion at all degree levels.

Figure-3.1: Enrolment by Male-Female in University of Sindh, Jamshoro n=14 (%)



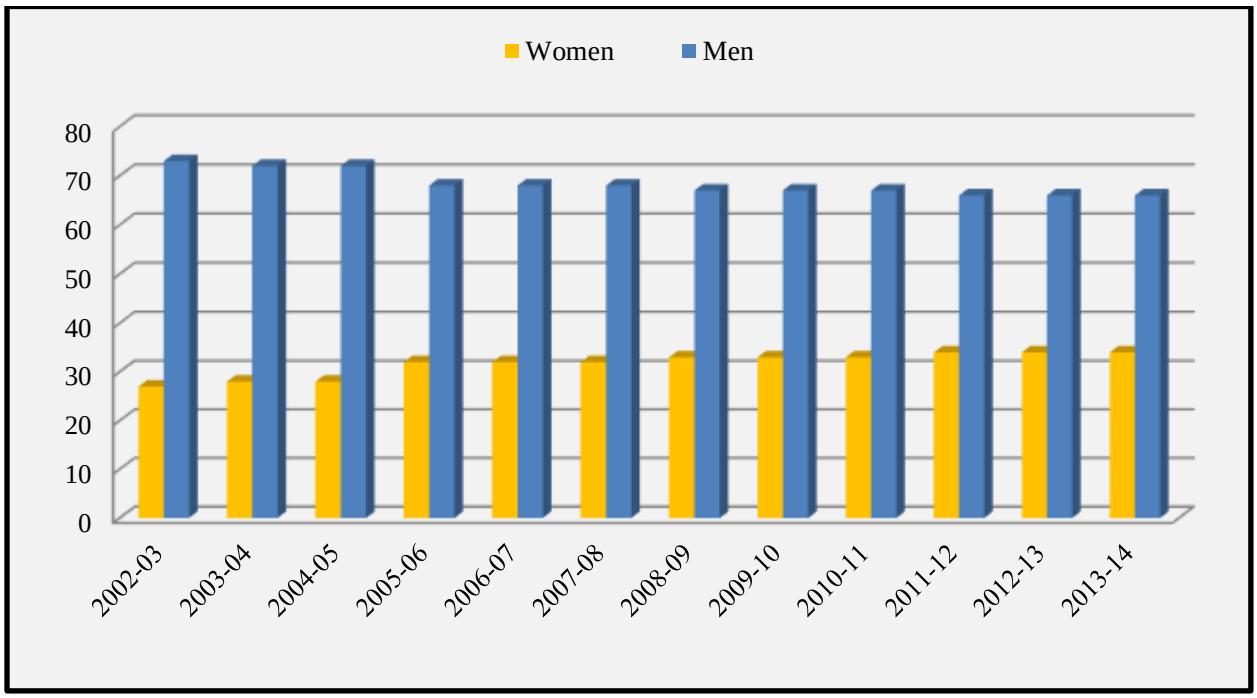
Source: Director of admission Office University of Sindh, jamshoro, 2013-14

d) Academic Cadre

In University of Sindh, jamshoro at academic cadre women faculty contribute at all academic positions from lecturer to professor categories into six academic faculties and many full-fledged teaching institutes, centers and departments. Women play a vital role in research activities and produce numbers of post graduate students up to doctorate level under their supervision and co-supervision. In research (i.e. research publications, contribution in conferences, seminars and workshops) women's contribution in University of Sindh, Jamshoro cannot be denied however, their representation remains unequal to men.

Figure 3.2 shows trends for men and women representation at academic cadre in University of Sindh, jamshoro data indicates that women unequally participated at academic cadre in University of Sindh without significant progress during past decade.

Figure-3.2: Men-Women Participation at Academic Cadre in University of Sindh, Jamshoro n=12 (%)



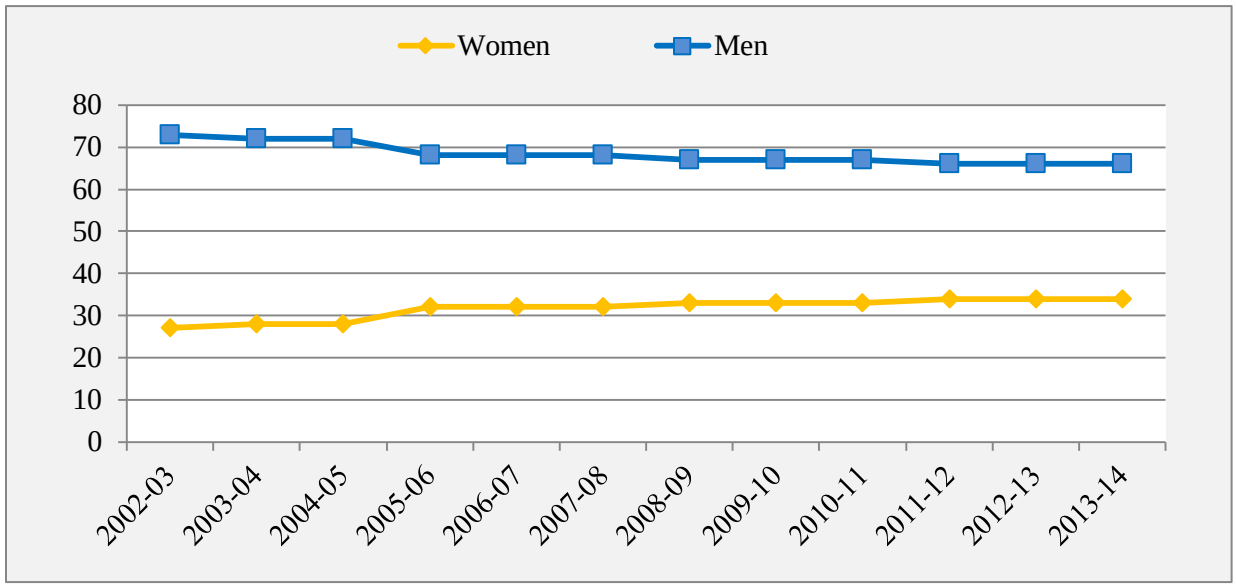
Source: Registrar Office University of Sindh, Jamshoro, 2013-14

e) Management Cadre

The management cadre University of Sindh, Jamshoro headed by a Vice-Chancellor of the institute. The other important administrators including Pro-Vice Chancellor, Registrar, Controller of Examination, Director of Finance, Director of Admission, Director of Planning and Development, Director of Research/Postgraduate, Deans, Directors, and Chairpersons of Teaching Departments etc perform their management responsibilities under Vice-Chancellor. At management cadre in University of Sindh, Jamshoro women participated as Pro-Vice Chancellor, Director of Sports, Director/Chairperson/In-Charge Chairperson of Departments, Hostel Provost and Deputy Hostel Provost. In University of Sindh, Jamshoro women working at top and middle management levels and proved that women have potential to work at key decision making positions at university level. However, figure 3.3 highlights that overall women

as human resource in management of university of Sindh, Jamshoro not equally participated with men. In University of Sindh, Jamshoro most of the management positions are dominated by men managers (this includes Registrar, Controller of Examination, Director of Finance, Director of Admission etc) only in few categories women can be seen.

Figure-3.3: Men-Women Participation at Management Cadre in University of Sindh, Jamshoro n=12 (%)



Source: Registrar Office University of Sindh, Jamshoro, 2013-14

3.16.2 Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro

Liaquat University of Medical Health Sciences (LUMHS), Jamshoro is one of the oldest medical degrees awarding institution in Pakistan (Official Website LUMHS, 2014). This university plays a leadership role in standardizing medical education in the country, on the other side university has remarkable contribution in provision of health care facilities (LUMHS Prospectus, 2013). Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro, located in the province of Sindh on the right bank of river Indus at Jamshoro, it is 160 kilometer north from the port city of Karachi and 16 kilometer from the historical city of Hyderabad (Official Website LUMHS,

2014). Liaquat University Hospital at Jamshoro and Civil/Liaquat University Hospital at Hyderabad serves as attached hospitals with Liaquat University of Medical Health Sciences (LUMHS) Jamshoro, for health care facilities and as place for graduates and postgraduates teaching and research. Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro, aims to achieve prominence as a top tier world-class medical research and teaching university, producing topnotch healthcare providers, operating excellence in every segment of the community. The mission of Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro is to foster excellence in health professional education and research, to educate and train undergraduate and postgraduate students of medical and health sciences in accordance with highest professional standards and ethical values and to meet the healthcare needs of the community through dissemination of knowledge and service. There are one medical college (i.e. Peoples Medical College for Girls, Benazirabad) and two nursing college (i.e. Peoples Nursing School, jamshoro and Jinnah Postgraduate Medical College (JPMC) of Nursing, Karachi) affiliated with Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro. Beside these for some postgraduate courses of Jinnah Center and many Institutions are affiliated with Liaquat University of Medical & Health Science (LUMHS), Jamshoro. University also provides some facilities separately for women staff and girls students this includes hostel and sports.

a) Historical Background

Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro is the first ever public sector Medical University has a long history of imparting quality medical education (Isani & Virk, 2003). University started as a Medical School in the present Civil Hospital Hyderabad Sindh in 1881, the first ever medical institution in the province of Sindh upon separation of Sindh from the Bombay residency (LUMHS Prospectus, 2013). This school was upgraded to the status of a Medical College to impart teaching for Bachelor of Medicine and Bachelor of Surgery (MBBS) course under Bombay University. This medical College at Hyderabad Sindh was

inaugurated by first Governor of Sindh Sir Francis Moody, and first batch of 45 students including one Muslim female student were admitted. This College was then shifted to Karachi on 10 December 1945 and was renamed as Dow Medical College. The Sindh Government subsequently started another College in the premises of same Civil Hospital at Hyderabad in 1951, which acquired its name as Liaquat Medical College, after the name of first Prime Minister of Pakistan, Mr. Liaquat Ali Khan. The College with its journey and natural growth for more than 57 years has made tremendous contribution in both medical education and health care in the province and country. The college was shifted to its new, beautiful and spacious campus at, Jamshoro in 1963. Initially, it offered Bachelor of Medicine and Bachelor of Surgery (MBBS) course only, the dental section for imparting education and training for the degree of Bachelor of Dental Surgery (BDS) was added in 1963, in the same year the college also started postgraduate courses. The number of postgraduate courses expanded gradually and the college acquired the status of Postgraduate Medical Institute in 1989. Besides, it becomes a recognized institution for the training for Fellow of College of Physician and Surgeon (FCPS) and Member of College of Physicians & Surgeons (MCPS) in all most all disciplines of medical, Surgery, Dentistry and Allied Sciences. It also received recognition from accreditation bodies of foreign countries such as British General Medical Council of United Kingdom, Educational Commission for Foreign Medical Graduates (ECFMG) of United State, and similar bodies of several other countries. College has made significant contribution in postgraduate medical education and has produced more than 12 hundred specialists in various disciplines of clinical and basic Sciences, with postgraduate qualification of Doctor of Medicine (M.D), Master of Science (M.S), Master of Philosophy (M.Phil), and Diplomas. It was this outstanding contribution of the college was led to upgrading the status of Liaquat Medical College to Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro.

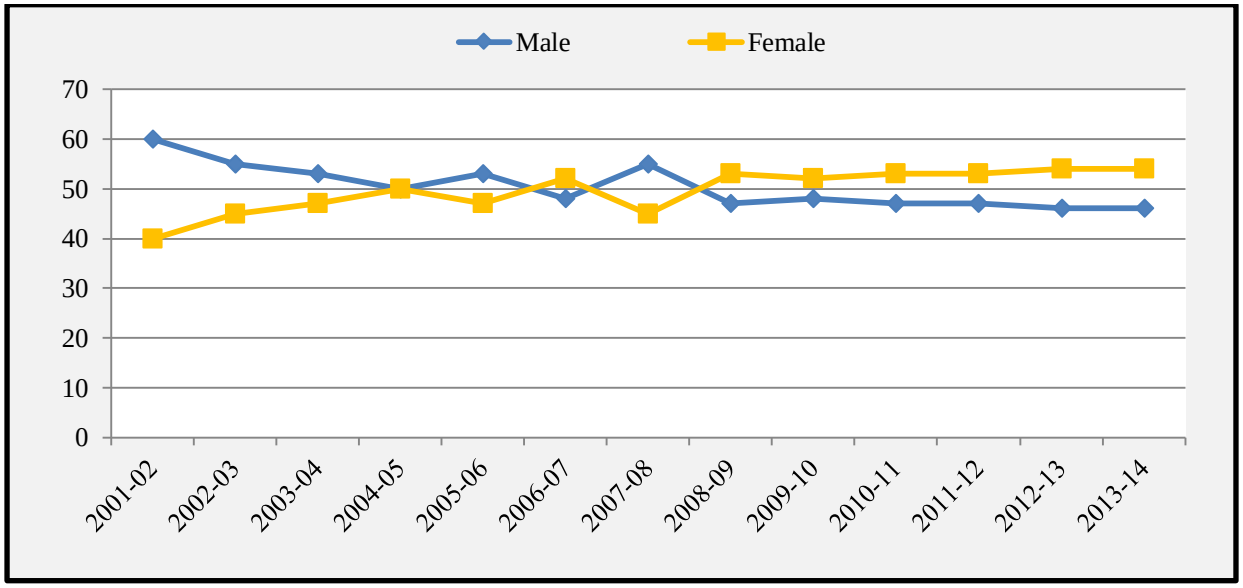
b) Offered Courses

Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro, offers undergraduate five years course of studies which led to the award of Medicine and Bachelor of Surgery (MBBS) degree and a four year course of studies of Dentistry for award of Bachelor of Dental Surgery (BDS) degree by University. In postgraduate studies university offers four years and five years Master of Science degree into various disciplines such as in Plastic Surgery, Obstetrics and Gynecology, General Surgery, Ear Nose Throat (ENT), Ophthalmology and Orthopedic Surgery etc, and two years Master of Science degree in different dentistry courses and Masters in Physical Education (M.P.H) degree. University offers two years training program for award Member of College of Physicians & Surgeons (MCPS) in Obstetrics and Gynecology, Ophthalmology, Pediatrics, Dermatology and two years Diploma courses in many disciplines such as in Child Health (D.C.H), Obstetrics and Gynecology (D.G.O), Clinical Pathology (D.C.P), and Medical Radio Therapy (D.M.R.T) etc.

c) Female Enrolment

Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro accommodates 519 male and female students (Director of Admission and Registrar Office Liaquat University of Medical & Health Sciences, 2013-14). The yearly intake of medical students in Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro has been improved during last decade. Clustering of female students in medical fields makes encouraging female enrolment ratio in Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro. Figure 3.4 shows fluctuating male-female enrolment trends and highlights that during past years female enrolment significantly improved and becomes more than male.

Figure-3.4: Male-Female Enrolment in Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro n= 13 (%)



Source: Director of Admissions Office, Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro, 2013-14

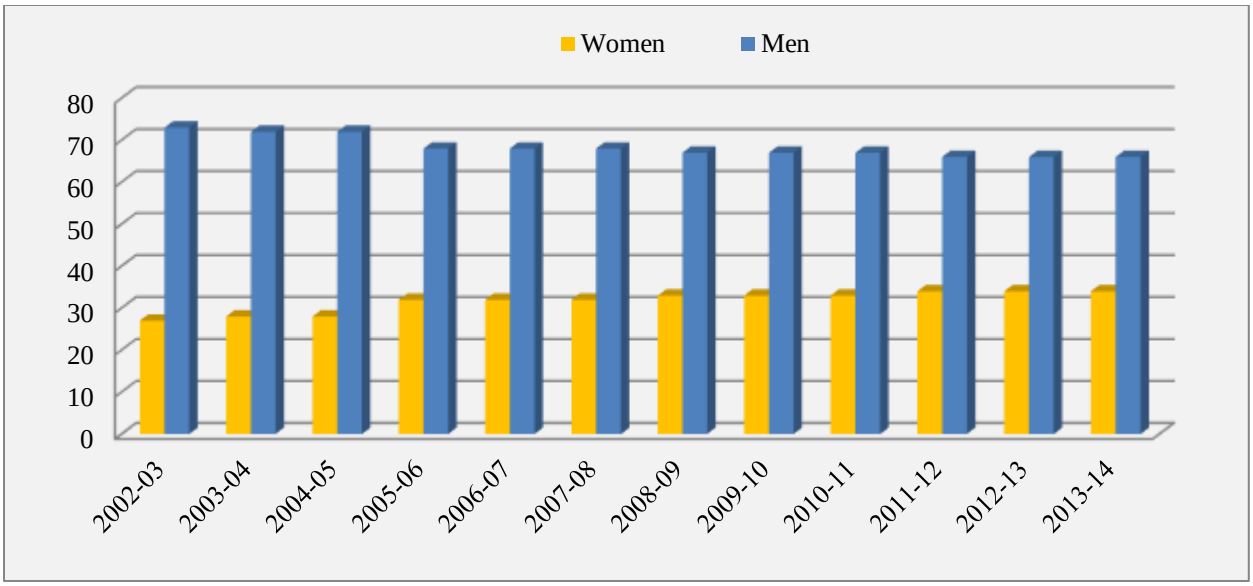
- Before 2001-02 status of Liaquat University of Medical & Health Sciences(LUMHS), Jamshoro was served as Medical College

d) Teaching Staff

In Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro at academic cadre women faculty perform multiple duties. Women faculty participates at all academic positions (this includes professors, assistant professors, associate professors, senior and junior lecturers) and providing their services for research promotion and research production. In addition women professors, assistant professors and associate professors also perform their health care duties in those hospitals which are attached with Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro (i.e. Liaquat University Hospital, Jamshoro and Liaquat University Hospital, Hyderabad). In Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro women faculty also provides their professional services to meet the healthcare needs of the

community. Therefore they are also involved in free medical camping activities (this includes flood victims etc) as for the welfare of other needy peoples. Figure 3.5 indicates that beside performed various tasks to achieve related with teaching, research and health care, women faculty representation at academic cadre in Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro is not equal to men.

Figure-3.5: Men-Women Academic Representation in Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro (%) n=12



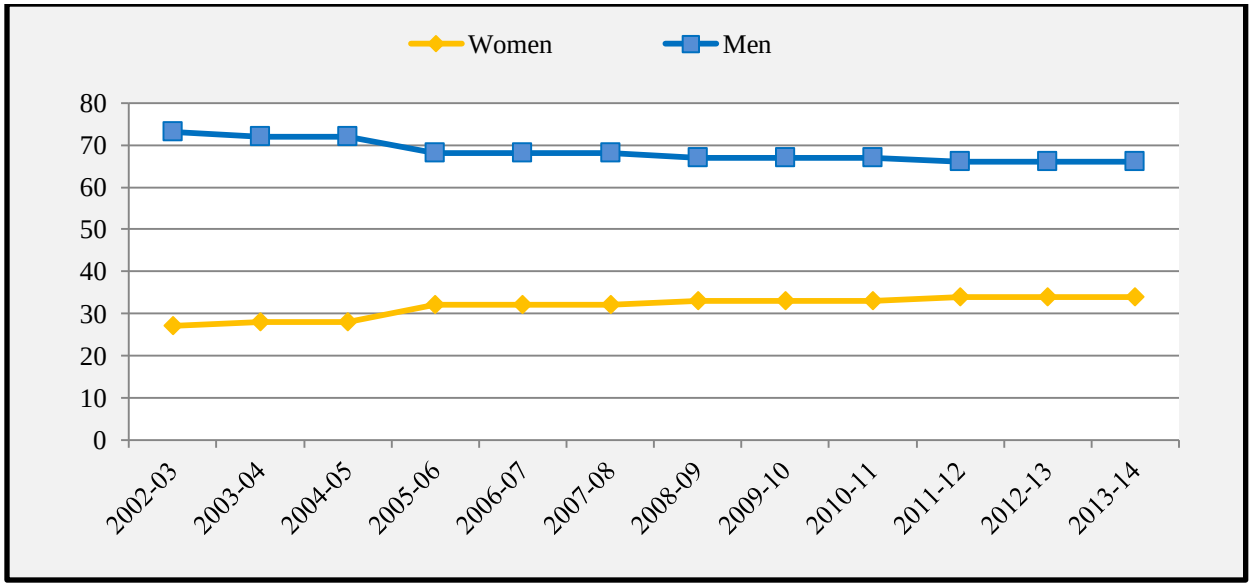
Source: Registrar Office Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro, 2013-14

e) Management Structure

In Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro, administration structure includes Governor of Province performs function of Chancellor of University, Minister of Health serve as Pro-Chancellor. The management cadre headed by a Vice-Chancellor of the university. There is no Pro-Vice Chancellor as to assist the Vice-Chancellor in university academic and management work. Registrar, Controller of examination, Director of Finance, Director of Admission, Director of Planning and Development, Director of

Research/Postgraduate, Deans, Directors, Principal (Institute of Dentistry) and Chairpersons of Teaching Departments etc perform their management responsibilities as to manage university related affairs. In this medical institute woman are participating at various management positions, such as Heads of Teaching Departments, Director of Admission, Hostel Provost, Deputy Hostel Provost, Protocol Office, and Secretary to Vice Chancellor as well as women role in clinical management cannot be ignored. Whereas, figure 3.6 shows that women representation at management cadre in Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro is not encouraging.

Figure-3.6: Men-Women Participation at Management Cadre in Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro n=12 (%)



Source: Registrar Office Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro, 2013-14

- Management positions includes Vice-Chancellor, Pro-Vice-Chancellor, Registrar, Controller of Examinations, Director of Research/Post Graduate Studies, Deans, Director of Finance, Director Of Planning & Development, Director Admissions, Director of Sports, Directors/Chairperson of departments, Deputy Director/Advisor/Chief Planning & Development, Librarian, Additional Registrar, Director of I.T & Additional controller & Deputy Registrars.

In Liaquat University of Medical & Health Sciences (LUMHS) Jamshoro women are performing heavy work load management responsibilities as Dean of Faculty and Clinical Unit In charges.

However, at management level women limited her into few management positions and remain under used resource at decision making and policy formulation key positions such as Vice-Chancellor, Registrar, Controller of Examination, Director of Graduate Studies etc.

3.16.3 Mehran University of Engineering and Technology, Jamshoro

The Mehran University of Engineering and Technology, Jamshoro is the well known professional engineering institute in Pakistan (Isani & Virk, 2003). University imparting advance engineering and technology education and training to their students and equips them in all respects for subsequent successful careers. The Mehran University of Engineering and Technology, believes in establishing favorable environment for top class professional education and research. University has aim to produce quality professionals who uphold and advance for the integrity, honor and dignity of their profession, while taking part in the development of society (MUET Prospectus, 2013). The Mehran University of Engineering and Technology located in the university town of Jamshoro in the Sindh province, along with the University of Sindh and Liaquat University of Medical & Health Sciences in district Jamshoro, province of Sindh, Pakistan. It is about 15 kilometer away from Hyderabad on the right bank of river Indus (MUET Official Website, 2014). There are three affiliated colleges/institutions (this includes Government College of Technology, Hyderabad, The Hyderabad Institute of Arts, Science and Technology, Hyderabad and Mehran College of Science and Technology, Hyderabad) working under Mehran University of Engineering & Technology (MUET).

a) Historical Perspective

Industrial and technological development in Pakistan has been quite rapid since its independence (Shahid, 2008). The main fields of development have been related to the enhancement of agriculture, establishment of an up-gradation of industries and exploration of its indigenous resources (Economic Survey of Pakistan, 2011-12). This development has resulted in increased

demand for qualified engineers in different fields in addition to other professionals. In order to meet the demand for qualified engineers and other professionals and to provide an opportunity of engineering education to the people hailing from the interior of Sindh Province, Sindh University Engineering College was established in 1963 as a constituent College of University of Sindh in Jamshoro (MUET Prospectus, 2013). The Education Policy of 1972 provided for up-gradation of the Sindh University Engineering College to the level of a University of Engineering and Technology. Accordingly, the college was first declared as an additional campus of the University of Sindh headed by a pro-vice-chancellor in July 1976 and later upgraded to the level of a full-fledged independent university, on 1 March, 1977 through an ordinance issued by the Government of Sindh (MUET Official Website, 2014). The ordinance was later converted into an Act of the Provincial Assembly of Sindh Province. The new University was named as Mehran University of Engineering and Technology**.** Initially, the Additional Campus as well the Mehran University was established in the City of Nawabshah, necessitating shifting of the most of the infrastructure from Jamshoro. However, in 1979, the Act of the University was amended and the seat of the University was retained at Jamshoro, while a constituent College titled 'Mehran University College of Engineering and Technology' was maintained at Nawabshah, to cater for the needs of the engineering education of upper Sindh. Mehran University College of Engineering and Technology, Nawasbshah, has also become an independent University in 1996, which has been renamed as 'Quaid-e-Awam University of Engineering Sciences and Technology'. Consequently, Mehran University of Engineering and Technology now exists only at Jamshoro, having territorial jurisdiction over the Hyderabad and Mirpurkahs Divisions of Sindh Province. Nevertheless, few seats are still reserved for the candidates coming from other divisions of Sindh Province. The large proportion of candidates are admitted to the first year classes of all the under-graduate disciplines from Sindh Province, including Karachi Division, according to a precisely calculated ratio of population and other considerations. Applicants are also admitted from other parts of Pakistan while some seats are reserved for foreigners.

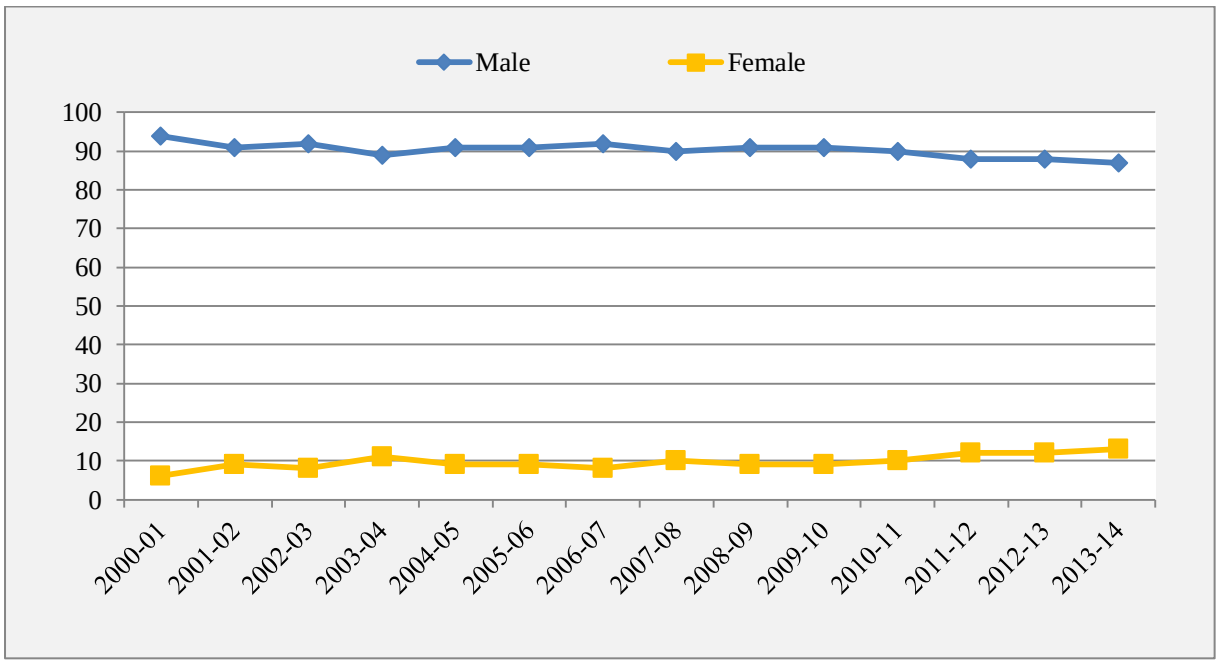
b) Study Programs

Mehran University of Engineering and Technology (MUET), Jamshoro offers undergraduate courses in various disciplines for Bachelor of Engineering (B.E) and Bachelor of City and Regional Planning (B.CRP) which comprises of four years duration. The Center of Excellence in Arts & Design offer Bachelor of Fine Arts and Bachelor of Design comprising of four year duration, and Bachelor of Architecture (B.Arch) is of five years duration. The postgraduate studies research programs is offered in various specialized fields, for award of Postgraduate Diploma (P.G.D), Master of Engineering (M.E), Master of Philosophy (M.Phil) and Doctor of Philosophy (Ph.D) degrees and provide research guidance for research study. Affiliated Institutes offers undergraduate degree programs in special fields/disciplines. Mehran University of Engineering & Technology (MUET), Jamshoro provide opportunity to both male and female as to become efficient human resource and contribute for economic prosperity of the country.

c) Female Students Representation

Mehran University of Engineering & Technology (MUET) play significant role in order to promote the total enrolment level of engineering students. This engineering university accommodates 1487 male and female students. However, figure 3.7 shows wide male-female gap at enrolment level in Mehran University of Engineering & Technology (MUET) without prominent progress during last decade. Female's poor representation at enrolment level often explains by lack of self-interest in engineering courses and cultural norms (see chapter two).

Figure-3.7: Male-Female Enrolment in Mehran University of Engineering and Technology, Jamshoro n= 14 (%)

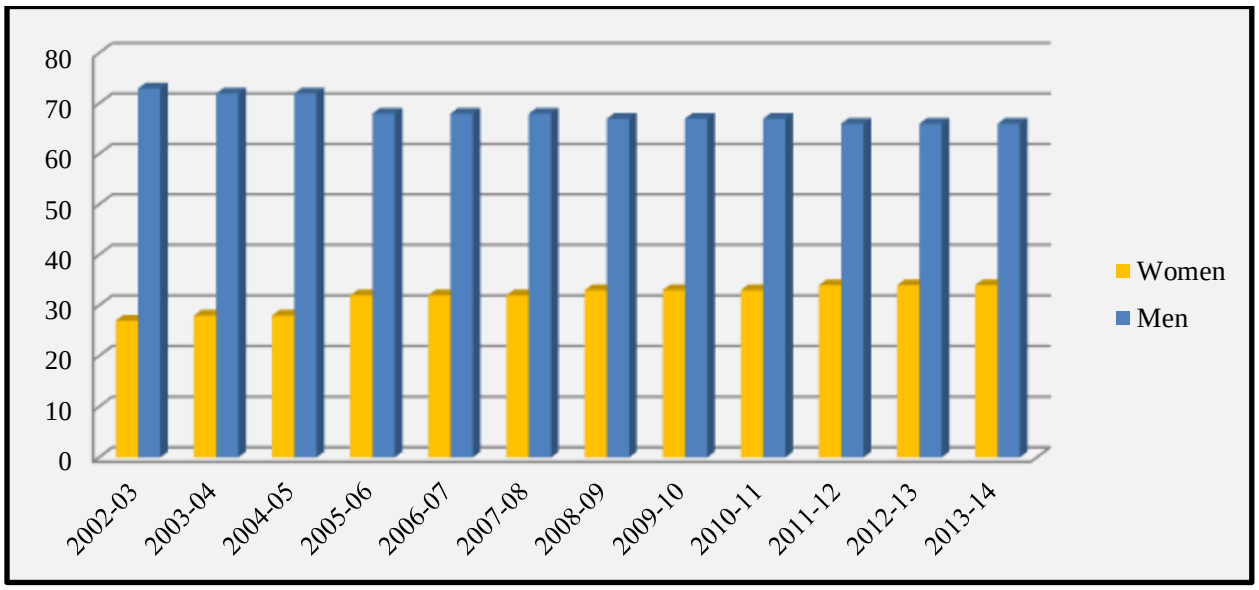


Source: Director of Admissions Office Mehran University of Engineering and Technology, Jamshoro, 2013-14

d) Women Teaching Staff

In Mehran University of Engineering & Technology (MUET), Jamshoro faculty members involved in teaching and research as well as management of university related affairs. The academic structure consists on professors, associate professors, assistant professors and lecturers of the departments. Women faculty working side by side with men faculty members into four faculties and many disciplines/institutions however, women as active and efficient human resource not equally utilized in Mehran University of Engineering & Technology (MUET), Jamshoro. Figure 3.8 presents the facts regarding men-women faculty proportions in Mehran University of Engineering & Technology (MUET), data indicative that at academic cadre women poorly represented these figures also disclose extend of deprivation among educated women in engineering university.

Figure-3.8: Men-Women Participation at Academic Cadre in Mehran University of Engineering & Technology (MUET), Jamshoro n=12 (%)



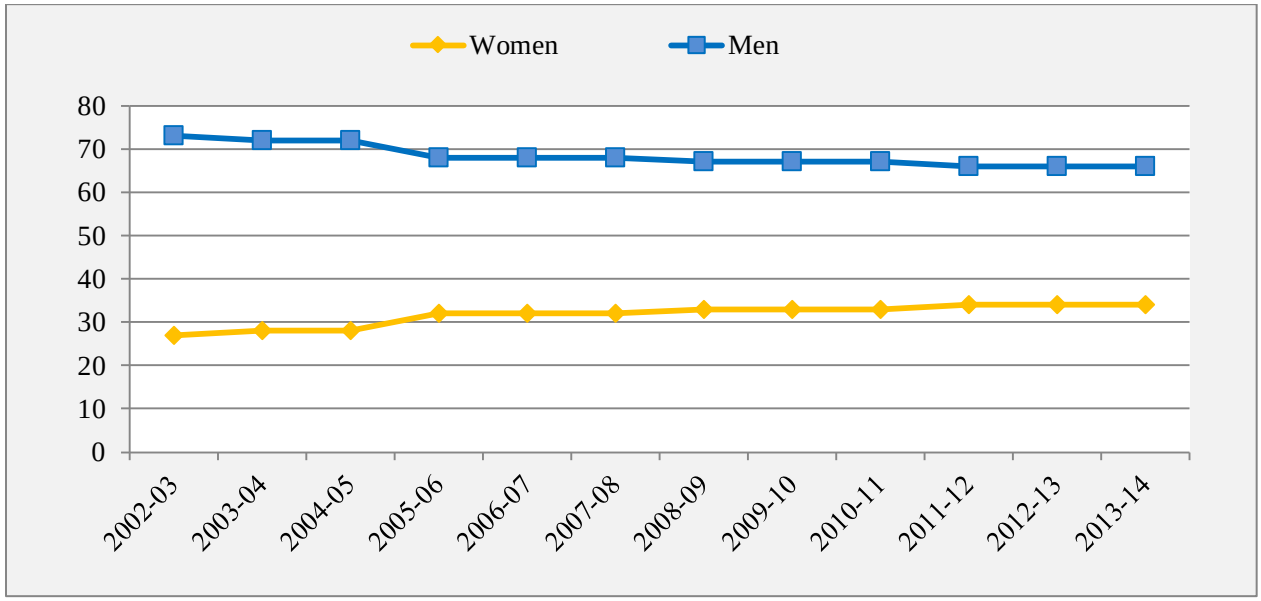
Source: Registrar Office, Mehran University of Engineering & Technology (MUET), Jamshoro, 2013-14

e) Women at Management Positions

In Mehran University of Engineering and Technology Jamshoro, Governor of Province performs function of institution's head as Chancellor of University. The Vice-Chancellor is principal executive and academic officer for the university. Pro-Vice Chancellor is working for assist the Vice-Chancellor. Registrar is the most integral officer of the university executive and major part of decision making authorities. Additional Registrar & Deputy Registrars appointed in order to assist to registrar. The Director of Finance, Controller of Examination, Resident Auditor Director of Admission, Director of Planning and Development and Director of Research/Postgraduate Studies are the other key management positions. In addition, Deans, Directors and Chairpersons of teaching departments responsible for student management and proper functioning of all teaching and non-teaching affairs of their related faculty, institution and departments respectively. In the scenario of professional and non-professional Higher Education Institutions

(HEIs) women's undermine status at decision making and leadership positions are not very different in different institutions and showing unsatisfactory ratio of male-female.

Figure-3.9: Men-Women Participation at Management Cadre in Mehran University of Engineering & Technology (MUET), Jamshoro n=12 (%)



Source: Registrar Office, Mehran University of Engineering & Technology (MUET), Jamshoro, 2013-14

- Management positions includes Vice-Chancellor, Pro-Vice-Chancellor, Registrar, Controller of Examinations, Director of Research/Post Graduate Studies, Deans, Director of Finance, Director Of Planning & Development, Director Admissions, Director of Sports, Directors/Chairperson of departments, Deputy Director/Advisor/Chief Planning & Development, Librarian, Additional Registrar, Director of I.T & Additional controller & Deputy Registrars.

Figure 3.9 highlights that the representation of women at management cadre in Mehran University of Engineering & Technology (MUET), Jamshoro is not encouraging. In Mehran University of Engineering & Technology (MUET), Jamshoro women are completely disappeared at all important management positions only one women working as librarian in BPS 20. Therefore it is stated that in Mehran University of Engineering & Technology (MUET), Jamshoro women are at particular disadvantage position both at academic and management cadre.

3.17 Conclusions

Women unequally participated in Higher Education Institutions (HEIs) of Pakistan this issue has never been confined out. Therefore, carefully research design was formulated for The Study to collect multiple data and to achieve multiple objectives of this research within limited resources. One general (i.e. University of Sindh, Jamshoro) and two professional leading universities (i.e. Mehran University of Engineering & Technology (MUET), Jamshoro and Liaquat University of Medical Health Sciences (LUMHS), Jamshoro) purposively selected. The selected universities are 22 percent of total public universities in Sindh. Chapter shows that The Study intends to present trends (i.e. motivation, personality traits, education status etc) through quantification of data using formal statistical approaches along with informal methods of data collection. The findings are relevant in understanding the culture of HEIs and place of women in those institutions. To analyze determinants and to identify the factors logistic regression and simple linear regression models were used. By applying MS Excel and Statistical Package for Social Sciences (SPSS) suitable analytical tools including tabulation, diagrams, frequency, standard deviation, mode, average and ratio were used to analyze and present the data.

Chapter Four

Constraints towards Women Participation in HEIs

4.1 Introduction

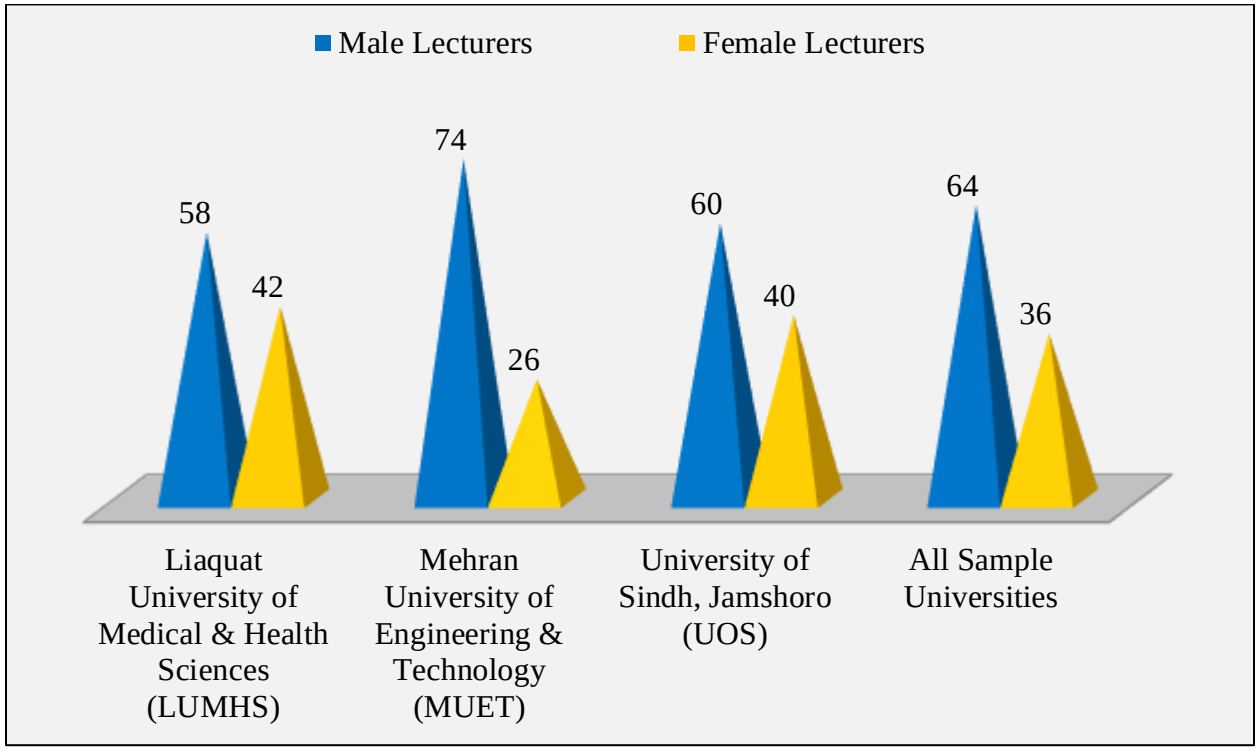
Chapter one explains the status of women education in Pakistan and chapter two presents women representation in Higher Education Institutions (HEIs). Chapter three explains methodological aspects of research which included detail reviewed about over all women representation in sample universities (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro). Women promotions at higher academic ranks also provide them opportunity to work at top and middle management positions in Higher Education Institutions (HEIs). Therefore, this chapter explains women academic status at senior (i.e. associate professor and full professor) and junior academic positions (i.e. lecturer and assistant professor) and identifies constraints that undermine women's role at senior academic positions and top and middle management levels in Pakistan as well as in sample universities in Sindh (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro). For this analytical tool including simple linear regression model (see chapter three research methodology) along with descriptive analysis and graphical representation is made.

4.2 Women Participation at Academic Cadre

Chapter two shows that women faculty unequally participated at academic cadre and their representation remain decline from senior to junior academic positions. In sample universities in Sindh gender gap that favors males is found at academic cadre (see chapter three). Therefore, this chapter categorize women faculty in sample universities in Sindh (i.e. Liaquat University of

Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro) according to their academic status to find out extent at which women faculty remain deprive to get access at higher academic ranks.

Figure-4.1: Male-Female Faculty Participation as Lecturers (%) n=498

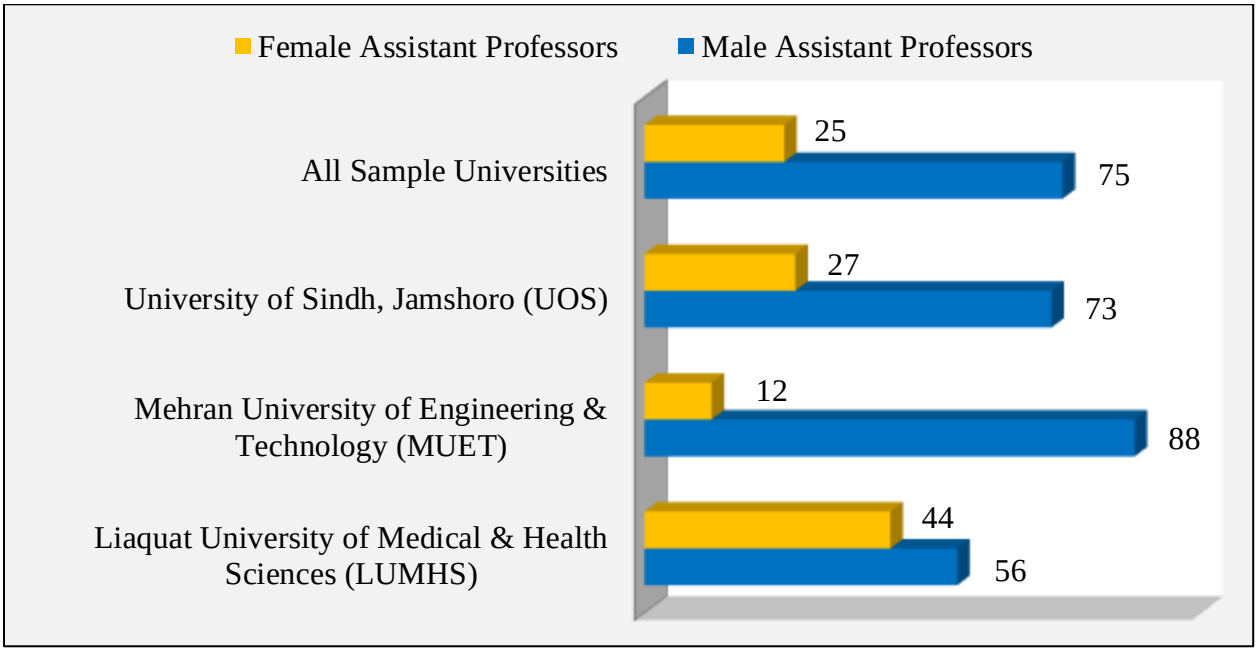


Source: Registrar Office, Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro, 2013-14

Figure 4.1 shows that as lecturer women faculty representation is not equal to men faculty in any sample university however, in Liaquat University of Medical & Health Sciences (LUMHS) and in University of Sindh, Jamshoro close gender gap as lecturer is encouraging. In contrast Mehran University of Engineering & Technology (MUET) is non-traditional subject based university for women (see chapter two and three) therefore, women faculty proportion as lecturer in Mehran University of Engineering & Technology (MUET) shows wide gender gap.

Figure 4.2 highlights men-women participation as assistant professors in sample universities. Data revel that as assistant professor women faculty status again remain unequal to men in sample universities in Sindh. Liaquat University of Medical & Health Sciences (LUMHS) is traditional subject based university for women and clustering of female students enrolled in this subject based universities/colleges (see chapter two and three), therefore, comparative analysis of sample universities shows that in Liaquat University of Medical & Health Sciences (LUMHS) women faculty representation ratio as assistant professor shows close gender gap in contrast, due socio-cultural norms in Pakistani society (see chapter two), poorest ratio of women assistant professor reported from Mehran University of Engineering & Technology (MUET).

Figure-4.2: Male-Female Faculty Participation as Assistant Professors (%) n= 347

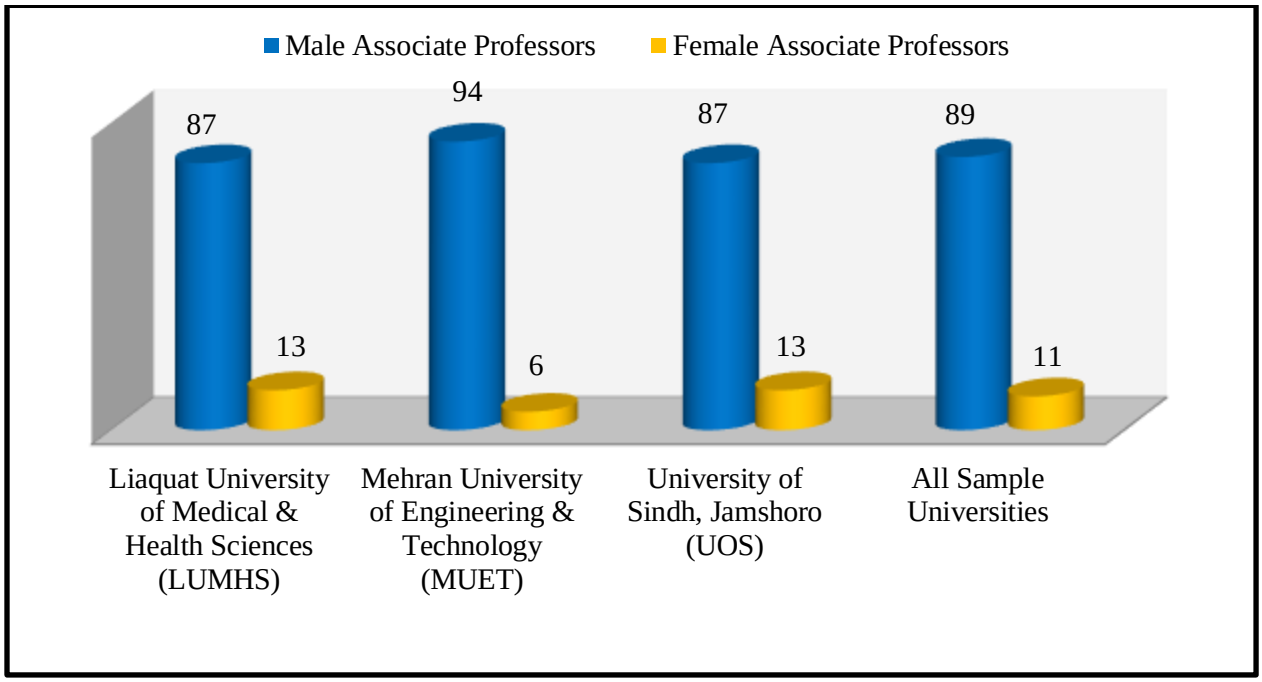


Source: Registrar Office, Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro, 2013-14

At university level associate professor is supposed as senior academic rank. Faculty promotion at associate professor level is required experience, numbers of research publications in journals and

higher degree that is PhD/specialization (see chapter two). Figure 4.3 shows men-women participation as associate professors in sample universities data revels that women faculty representation as associate professors is very low (i.e. 11 percent). Comparative analysis explore that not a prominent difference is found regarding women representation at professor category among sample universities in Sindh. This indicates that women faculty cited with lack of strong research record therefore gender gap become wider at senior teaching position.

Figure-4.3: Male-Female Faculty Participation as Associate Professors n=85 (%)

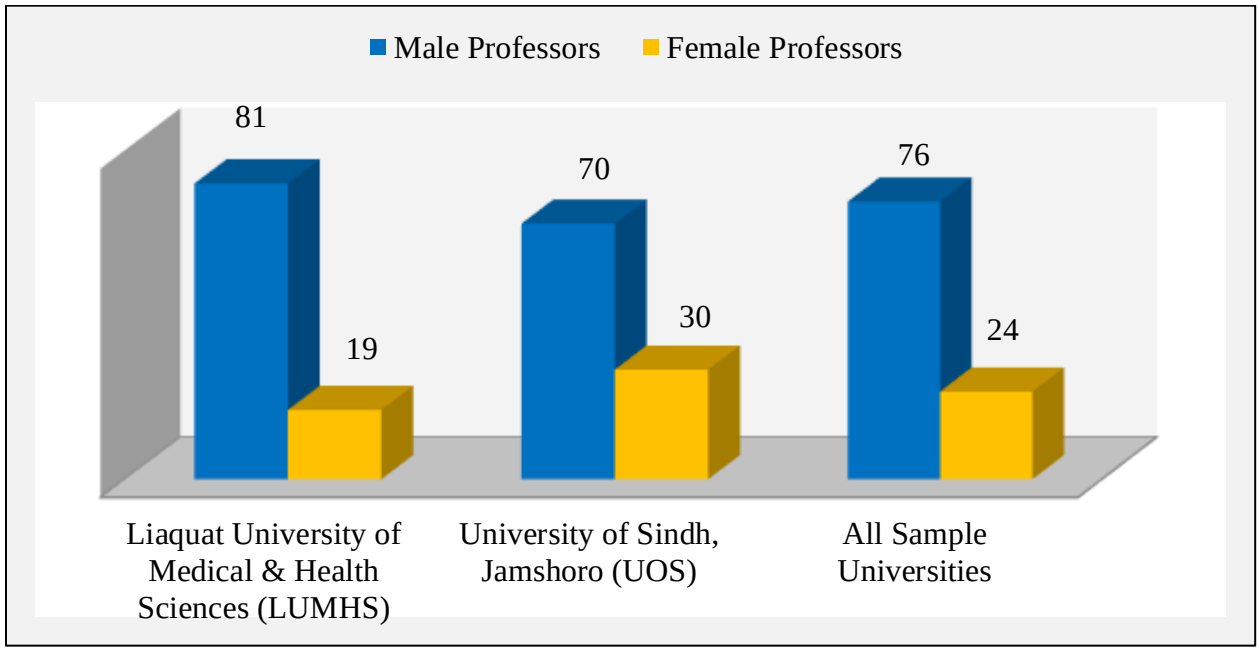


Source: Registrar Office, Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro, 2013-14

In past academic staff was upgraded up to professor designation without any condition of educational degree advancement (i.e. Master of Philosophy (M.Phil)/ Doctor of Philosophy (Ph.D) however, since last many years according to Higher Education Commission (HEC) of Pakistan required criteria, this becomes a necessary condition for appointing at higher teaching positions (see chapter two).

In sample universities in Sindh full professor is the most senior faculty category. Faculty promotion at full professor level is required many years of experience, numbers of research publications in journals and higher qualification (i.e. PHD/specialization). Whereas, chapter two shows that due to domestic role all over the world including Pakistan women faculty less motivated towards research activities.

Figure-4.4: Male-Female Faculty as Professors (%) n=105



Source: Registrar Office, Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro, 2013-14

Figure 4.4 shows male-female faculty participation ratio as full professors in sample universities. Data revels that women participation ratio at senior academic rank is not encouraging. Furthermore, in Mehran University of Engineering & Technology (MUET) not a single woman served as full professor. This indicative that in sample universities in Sindh large proportion of women faculty not strongly motivated to upgrade their academic status up to senior teaching positions therefore, less involved in research activities (i.e. to earn Ph.D degree and research publications) and stuck at junior teaching positions such as at lecturer level.

Trends regarding women academic status at senior (i.e. associate professor and full professor) and junior academic positions (i.e. lecturer and assistant professor) explore that women academic status is on the decline from junior to senior academic positions in sample universities (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro). These trends are more prominent in male dominating professional university (i.e. in Mehran University of Engineering & Technology (MUET)**.** Women poor participation at higher academic ranks also limited their access at decision making positions in sample universities in sindh.

4.3 Applying Regression for Predicting & Analyzing Women Academic Participation at University Level in Pakistan.

Simple linear regression (see chapter three) uses to determine the influence of independent variable on dependent variable (Jeffrey, 2012). In this chapter simple linear regression technique applied to analyze and predict the significant change in women academic participation (i.e. in numbers) during particular years at university level in Pakistan. Whereas, chapter two already explains the trends regarding women academic participation at university level in Pakistan.

Simple Linear Regression Model

$$Y = b_0 + bx + \varepsilon$$

Where

Y= dependent variable (i.e. numbers of female teachers at university level)

b_0=intercept/constant

b=coefficient

x_1=independent variable (i.e. years)

e=error term

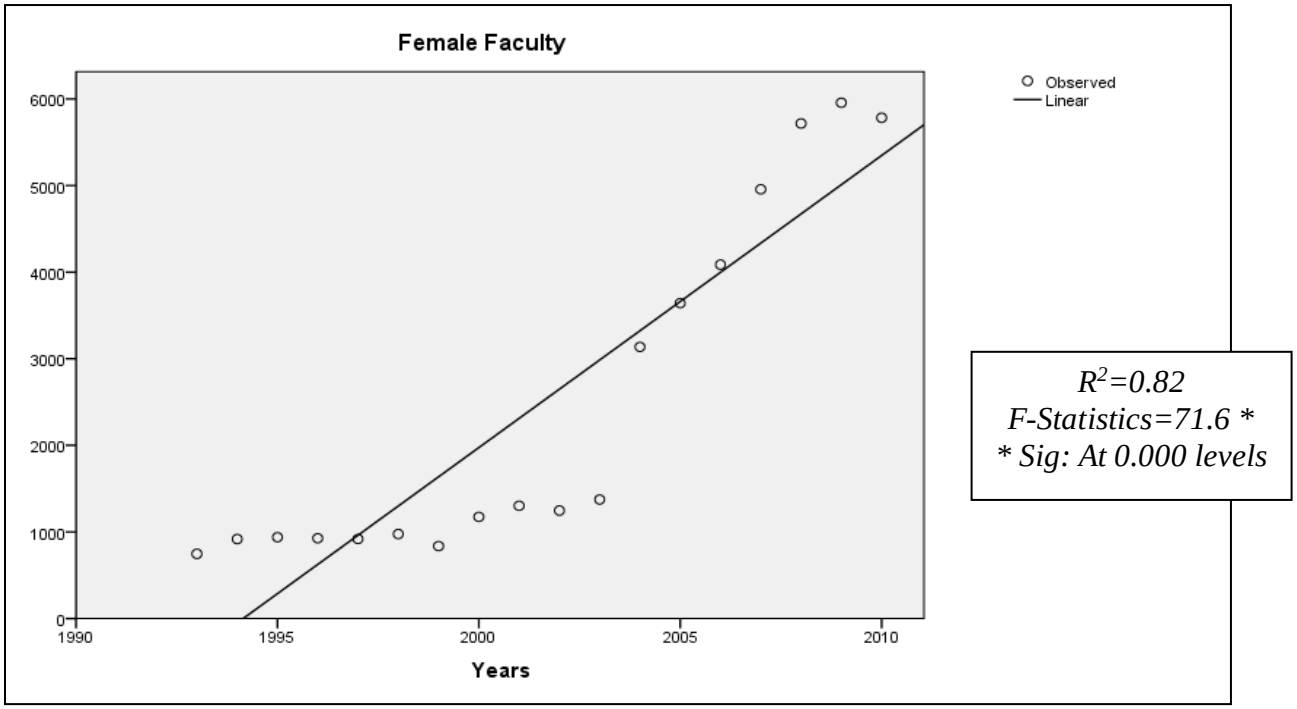
Simple Linear Regression Equation

$$Y = b_0 + bx$$

$$Y = -672665.759 + 337.320x$$

In figure 4.5 regression line indicates increasing women academic participation over passing years in Pakistan. However, comparative analysis of men with women faculty proportions (see chapter two) shows that women academic representation in Higher Education Institutions (HEIs) in Pakistan is not significantly improved. The value of F-statistics (i.e. 71.6) which is significant indicates that the equation as a whole is statistically significant in explaining female academic participation.

Figure-4.5: Regression Line and Observed Female Faculty Representation in Universities in Pakistan n =18 Years (1993 to 2010)



Data Source: Federal Bureau of Statistics of Pakistan, 2011-12

Table 4.1 presents coefficients in simple linear regression model (see chapter three). The positive B coefficient value (i.e. 337.320) indicates average increase in women academic participation associated with each passing year. Significant and positive value of t-statistics indicates that independent variable (i.e. year) has having a significant impact on women academic participation.

Table-4.1: Coefficients in Simple Linear Regression Model n=18

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		b	Std. Error	beta		
1	(Constant)	-672665.759	79762.539		-8.433	.000
	Years	337.320	39.851	.904	8.464	.000

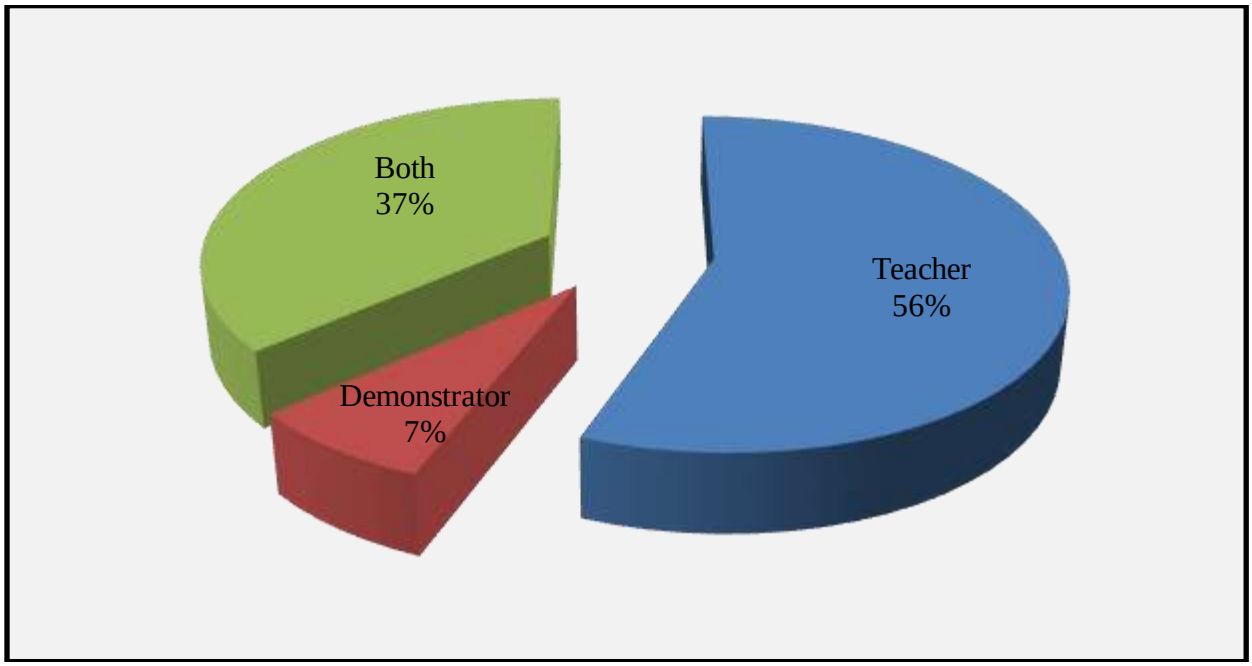
Data Source: Federal Bureau of Statistics of Pakistan, 2011-12

4.4 Discourage Women for Taking Academic Responsibilities in HEIs

At university level, teaching and research are inseparable components (Hill et al., 2010). In Higher Education Institutions (HEIs) active participation of faculty members in teaching and research activities correlated with their professional career advancement (see chapter two). Women unequally participated at academic and management cadre in sample universities in Sindh (see chapter three). Therefore, the analysis of academic performance by sample women is an attempt to discover extend at which sample women participated in teaching and research activities (i.e. research publications, research supervisors, presenting research papers in seminars, participated in conferences at national and international level etc) within sample universities (this

includes University of Sindh, Jamshoro, Liaquart University of Medical and Health Sciences (LUMHS) and Mehran University of Engineering and Technology (MUET) and to identify the academic obstacles which are suppose to be responsible for unequally women participation at academic and management cadre in sample universities in Sindh.

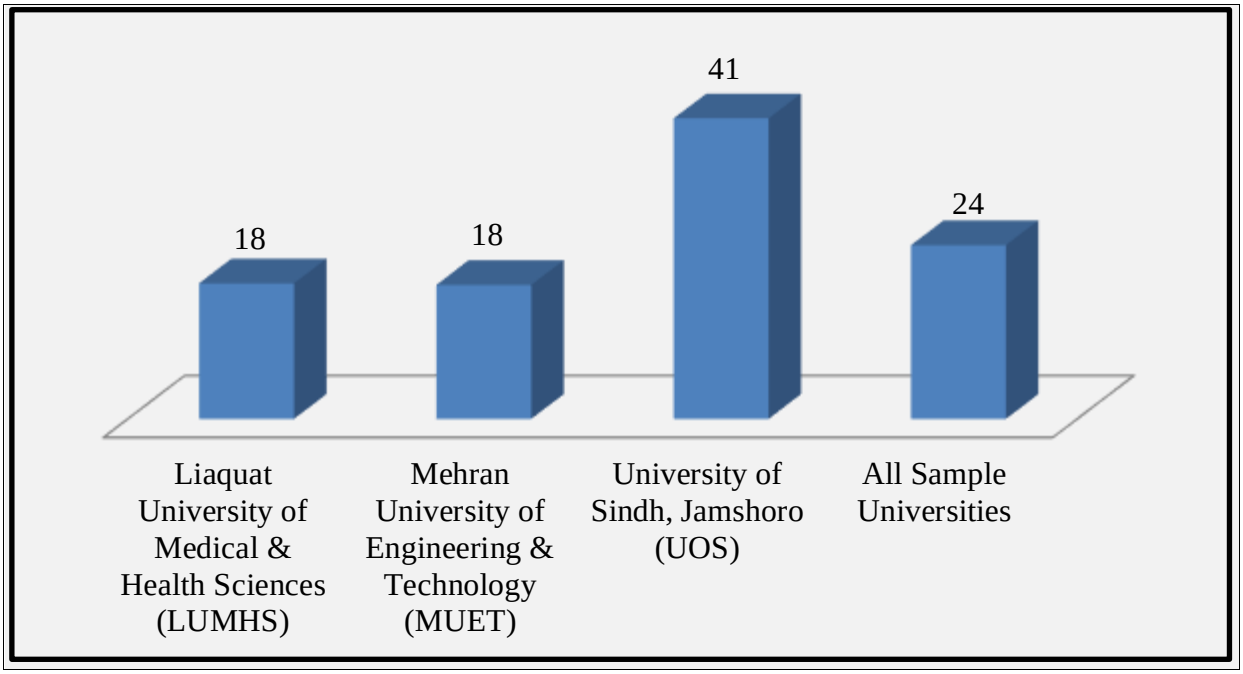
Figure-4.6: Women by Academic Responsibilities n=98 (%)



Source: Survey Data, 2012

Figure 4.6 divided women academic staff according to their academic responsibilities. Data revels that 56 percent sample women were associated with teaching, only 7 percent were worked only as demonstrators (this includes conducting practical, project discussions and supervision, ward and field visits and medical camping activities) and remaining 37 percent sample women were associated with teaching as well as demonstration. This indicative that beside regular teaching, sample women also actively involved in ward visits and medical camping activities (i.e. in Liaquat University of Medical & Health Sciences, Jamshoro), conducting practical, project discussions and supervision, field visits, etc.

Figure-4.7: Women as Post Graduate Research Supervisors n = 98 (%)



Source: Survey Data, 2012

- All sample women post graduate research supervisors reported from Mehran University of Engineering & Technology (MUET) were involved in supervising at M.E (i.e. Masters in Engineering) level.

According to Higher Education Commission of Pakistan required criteria, higher qualification (such as PhD/Specialization) is required criteria to serve as post graduate research supervisor in Higher Education Institutions (HEIs). However, it is a general trend that that women faculty is less in proportion as having higher degree in research therefore their representation is very low as research supervisors (see chapter two). Figure 4.7 highlights that in sample universities in Sindh (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro) 24 percent sample women were reported as research supervisors for post graduate degree programmes (i.e. PhD/M.phil/Specialization). This indicative that sample women participated in research promotions activities however, their representation as post graduate research supervisor is not encouraging. Mehran University of Engineering & Technology (MUET) and in Liaquat University of Medical & Health Sciences (LUMHS) 5 percent and 23 percent sample women

respectively reported as having PhD/Specialization degree in their related field. Consequently, sample women representation as post graduate research supervisors in Mehran University of Engineering & Technology (MUET) and in Liaquat University of Medical & Health Sciences (LUMHS) is very low (i.e. only 18 percent). Whereas, in University of Sindh, Jamshoro (UOS) 41 percent sample women reported as having PhD degree therefore, sample women representation as post graduate research supervisors in University of Sindh, Jamshoro (UOS) is encouraging (i.e. 41 percent). This indicates that sample women in University of Sindh, Jamshoro (UOS) more actively involve in reseach promotion activities rather than other sample universities (i.e. Liaquat University of Medical & Health Sciences (LUMHS) and Mehran University of Engineering & Technology).

In the context of social and cultural norms women remain less geographical mobile therefore regarding research activities their representation remain undermine particularly at international level (see chapter two). Table 4.2 shows very low ratio of sample women who earned post graduate foreign degree in the field of research (i.e. only 7 percent).

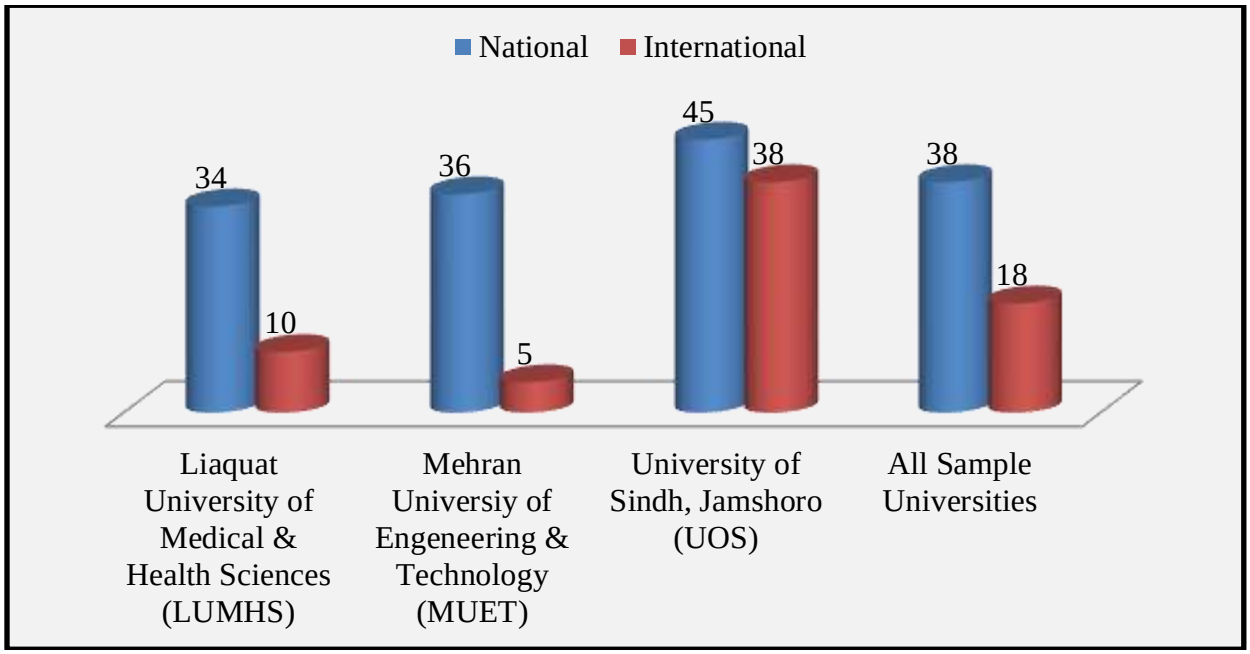
Table-4.2: Women Having Post Graduate Foreign Degree n =98

Sample Universities	Percent
Liaquat University of Medical & Health Sciences (LUMHS)	8
Mehran University of Engineering & Technology (MUET)	4
University of Sindh, Jamshoro (UOS)	9
All Sample Universities	7

Source: Survey Data, 2012

Furthermore, women faculty representation is remain very low in male dominating professional Higher Education Institutions (see chapter two and three). Therefore poorest ratio of sample women's having post graduate foreign degree in the field of research (i.e. only 4 percent) reported from Mehran University of Engineering & Technology (MUET). In order to enhance intellectual potential among faculty members, Higher Education Commission (HEC) of Pakistan offers scholarships for post graduate programmes at international levels. However, data indicate that sample women not availing these opportunity (see chapter two).

Figure-4.8: National and International Research Publications by Women n=98 (%)



Source: Survey Data, 2012

Faculty promotions at higher academic ranks are also conditional with numbers of faculty research publications in journals whereas, women faculty less published research articles in research journals (see chapter two). Figure 4.8 presents the comparative trends related to sample women's research publications in research journals at national and international level. Data indicates that sample women's contributions in research publications at national level cannot be

denied. In contrast, 62 percent and 82 percent sample women faculty has never published any research paper at national and international level respectively throughout their professional career. This suppose to be the main hurdle for unequal women representation at higher academic ranks (i.e. full Professor and Associate Professor) and limited their access at key management positions (i.e. Pro-vice-chancellor, Dean of Faculties, Director of graduate Studies etc) in sample universities of Sindh (see chapter three).

Table-4.3: Statistical Measures for Attended Workshops by Women at National Level n=80

Statistical Measures	**Liaquat University of Medical & Health Sciences**	**Mehran University of Engineering & Technology**	**University of Sindh, Jamshoro**	**All**
Minimum	1	2	1	1
Maximum	50	10	25	50
Standard Deviation	11	4	9	10
Average	13	5	12	12
Percent of Attended Workshops	82			

Source: Survey Data, 2012

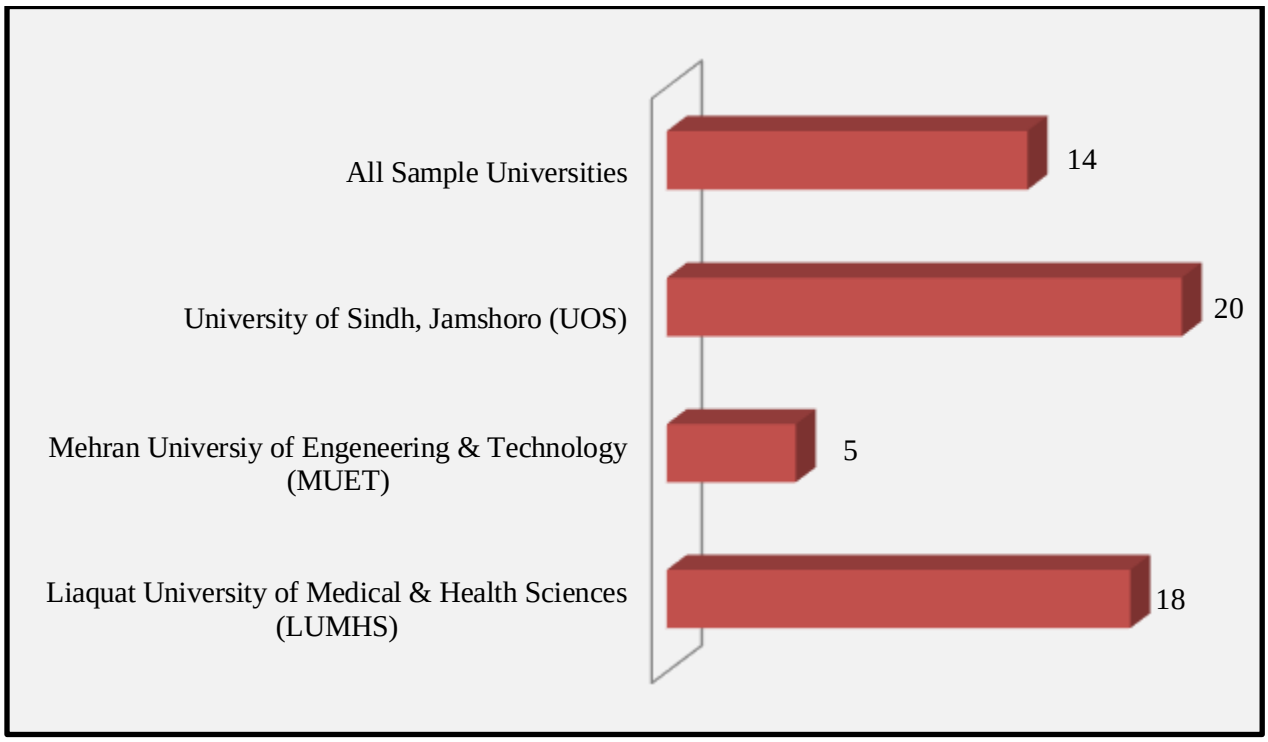
Attended workshops within academic and management staff have great importance for their professional success (see chapter two). Table 4.3 highlights statistical measures for attended workshops by sample women at national level in sample universities (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro). Data reveals that 82 percent sample women attended workshops throughout their professional career. Moreover, maximum numbers of attended

workshops (i.e. 50), value of average attended workshops by sample women (i.e. 12) shows that women academic and management staff actively involved in developing their professional skills, contacts and intellectual potential at national level. This indicates that sample women have motivation to develop their professional skills and intellectual potential. Majority of sample women reported from Mehran University of Engineering & Technology (MUET) was young and their service length[26] is not very large like other sample universities (i.e. Liaquat University of Medical & Health Sciences (LUMHS) and University of Sindh, Jamshoro). Therefore, the value of statistical measures for attended workshops by sample women reported from Mehran University of Engineering & Technology (MUET) was low compare to other sample universities (i.e. Liaquat University of Medical & Health Sciences (LUMHS) and University of Sindh, Jamshoro).

In Higher Education Institutions (HEIs) attended international workshops by women academic and management staff play important role for developing their professional skills and unofficial networks however, due to domestic roles in Higher Education Institutions (HEIs) women academic and management staff not frequently attended workshops particularly at international level (see chapter two). Figure 4.9 demonstrate trends for attended workshops by sample women at international level in sample universities in Sindh (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) & University of Sindh, Jamshoro). The low percentage of sample women (i.e. only 14 percent) who attended workshops at international level throughout their professional career in sample universities indicative that sample women have less availing the opportunities to develop their professional skills and unofficial networks at international level.

[26]Service length refers to duration of employment of a person in any organization.

Figure-4.9: Attended Workshops at International Level by Women n= 98 (%)



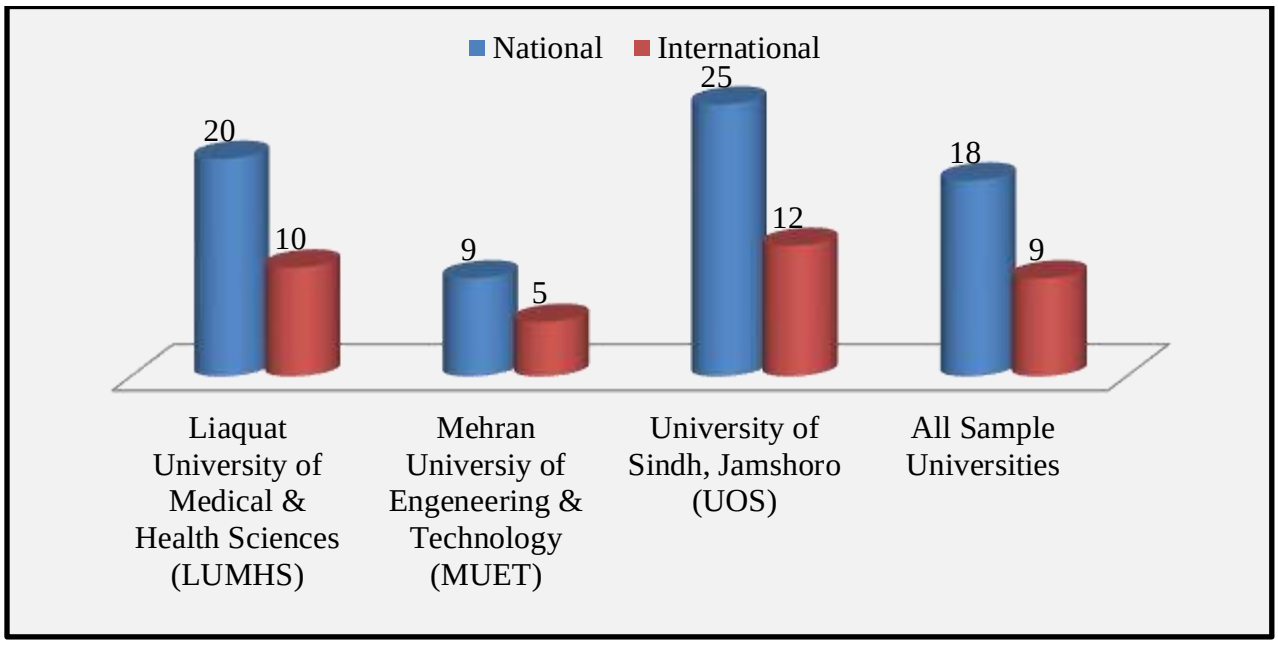
Source: Survey Data, 2012

In Higher Education Institutions (HEIs) presenting research papers at national and international level are the significant component to develop and share knowledge and research skills (see chapter two). Figure 4.10 demonstrate trends for presenting research papers by sample women at national and international level in sample universities. Data revels that 82 percent and 91 percent sample women did not presented any research paper throughout their professional career at national and international level respectively. This indicates that sample women short of self-motivation to share knowledge and develop research skills[27] at international level.

[27]Skills refer to learned abilities to achieve a task without wastage of time, energy and other resources.

Figure-4.10: Papers Presented in Seminars at National and International Level by Women

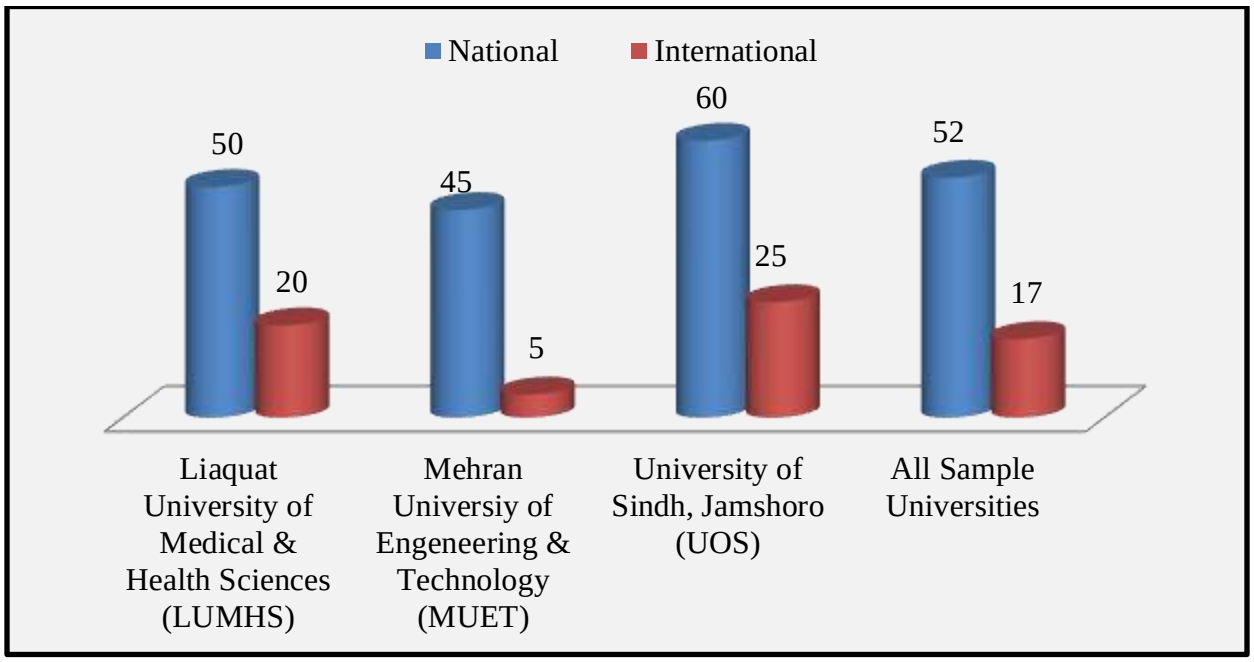
n= 98 (%)



Source: Survey Data, 2012

Women faculty active participation in research activities (i.e. conferences, seminars etc) remains a central factor to promote research culture, knowledge and career advancement amongst women faculty in Higher Education Institutions (see chapter two). Figure 4.11 highlights 52 percent sample women participated in conferences at national level this indicative that sample women have motivation to develop their research skills. In contrast only 17 percent sample women participated in international conferences this indicative that sample women has poor access to develop their research skills at international level. This trend is again more prominent in male dominating professional university (i.e. Mehran University of Engineering & Technology, Jamshoro). Women poor access at international level in research related activities another time related with customs and traditions in Pakistani society (see chapter two and four).

Figure-4.11: Women Participation in Conferences at National and International Level n= 98 (%)



Source: Survey Data, 2012

In Higher Education Institutions (HEIs) faculty promotions at senior academic ranks and their representation at key decision making positions also correlated with their active participation in research and professional skills development. The assessment of various academic parameters about sample women participation in teaching, research and professional skills development explores that sample women keenly participated in teaching activities. Sample women having motivation to develop their professional skill and also involve in research activities (i.e. research supervision, research papers writing, attending conferences, paper presenting in seminars etc). However, prominent ratio of sample women not actively contribution in research related activities (i.e. research publications, research supervisors, presenting research papers in seminars and attending conferences). A very low proportion of sample women availing the opportunities to earn foreign degrees in research, develop their professional and research skills and unofficial networks at international level. On other side poor women participation in research related

activities (i.e. research publications, research supervisors, presenting research papers in seminars etc) is mostly the impact of social and cultural norms in Pakistani society. Consequently women unequally participated at senior academic and key management positions. In Mehran University of Engineering & Technology (MUET) majority of sample women were young and these women have limited service length therefore, comparative analysis of sample universities identifies poorest ratio of sample women who involve in research activities reported from Mehran University of Engineering & Technology (MUET). Consequently, poorest women participation at academic and management cadre reported from Mehran University of Engineering & Technology (MUET).

4.3 Conclusions

In this chapter empirical results show that over past years women academic representation has been improved in Pakistan. Whereas, survey data shows that sample women faculty representation is on the decline from junior to senior academic positions in sample universities in Sindh. This trend is more prominent in male dominating engineering university. Chapter four focused to identify the constraints which are supposed to be responsible for unequal women representation at academic and management cadre in sample universities in Sindh. Chapter found that sample women have motivation to develop their professional skills and participating in research related activities however, due to domestic roles and attitudes of society, large proportion of sample women could not found time and energy to actively participate in research related activities and limited themselves only with teaching. Furthermore, due to socio-cultural norms sample women remain less geographically mobile therefore poorly availing the opportunities to develop their professional and research skills at international level.

Chapter Five

Assessing Self-Motivation and Decision Making Skills of Women

5.1 Introduction

Decision making is a primary and essential function of management, which exists in all parts of Higher Education Institutions (HEIs). Decision making positions demand various skills and abilities (this includes education, age maturity, experience, analytical skills, goal setting abilities, as well as, strong self-motivation to reach at senior academic and key management positions. Women having required qualification, skills and abilities will not be effective at decision making positions, unless, they are strongly motivated to devote their time and efforts in Higher Education Institutions (HEIs). Therefore, this chapter examines, the two factors, that is, motivation of women respondents taking the responsibilities into management affairs, and their decision making skills and abilities that provide her ground to take wise decisions. For this, analytical tools including logit model (see chapter three research methodology) along with descriptive analysis and graphical representation is made.

5.2 Motivation

The term motivation is derived from the Latin word movere, meaning to move (Streers et al., 2004). ***"Motivation is an internal force, dependent on the needs that drive a person to achieve" (Hong & Waheed, 2011, p.75).*** Motivation is the willingness to exert high levels of efforts to complete a task, it is the process that initiates, guides and maintains goal-oriented behaviors (Al-Zawahreh & Al-Madi, 2012). It is stated that employees equipped with the required knowledge, skills, and abilities will not become successful in their professional career or not be able to

upgrade their professional status unless they are strongly motivated to devote their time and efforts to work at particular position (Werner & Ones, 2000). Motivation may arise from outside of the individual, often involve rewards (this includes financial benefits, work environment, working hours, social recognition or praise etc) known as extrinsic motivation. Intrinsic motivation arises comes from insight the individual (i.e. enjoying the activity and inner satisfaction) Iguisi (2009). According to Bovee et al., (1993) success in a professional career is a product of abilities and motivation. In Higher education Institutions (HEIs) motivation to work makes academic and management staff more efficient at their academic and management positions (Jennifer Rowley, 1996). In Higher education Institutions (HEIs) motivation helps academic and management staff in their self-development[28] and creates challenging attitude (Tytherleigh et al., 2005). In this connection it is stated that strong self motivation to work is a significant factor which leads to academic and management staff to utilize their skills and abilities, to work harder and reach at senior academic and management positions.

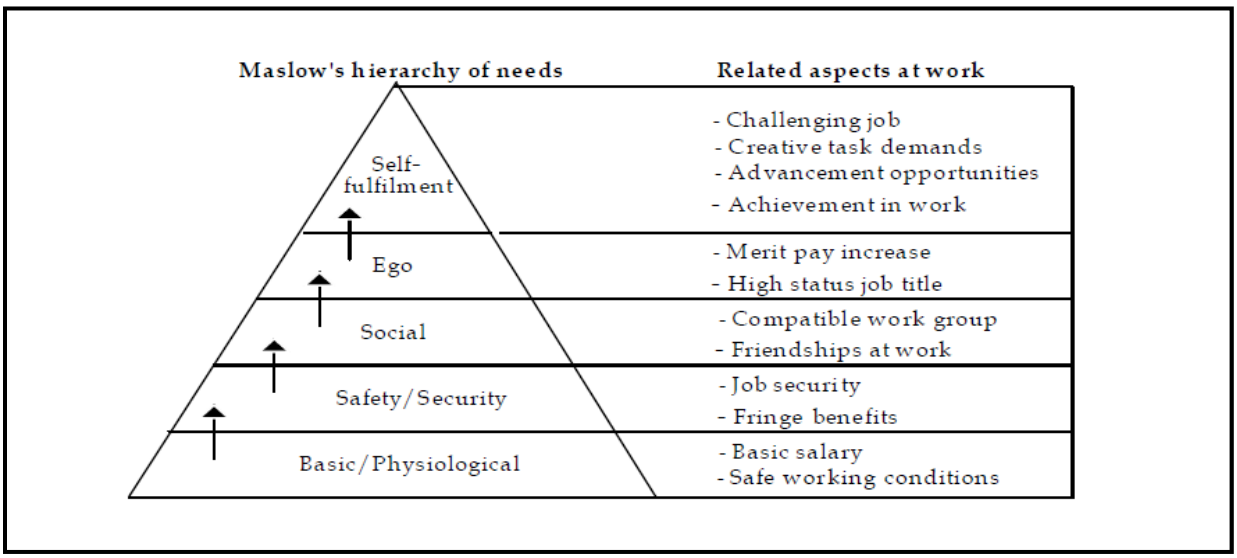
5.2.1 Motivation Theories

Over past decades several theories and models of work motivation were developed, these theories focused to explain the behavior and attitude of workers. Hierarchy of Need Theory given by a psychologist Abraham Maslow in 1954, this theory based on the hierarchy of human needs and their satisfaction.

Figure 5.1 indicates that Maslow's theory classified the human needs into five different categories. According to Maslow theory, in an organization, workers can be motivated to contribute to organizational goals, by satisfying their sequence of needs through work.

[28]Self-development is the state or process of improving or developing oneself (this includes mental, physical, emotional, social and spiritual development).

Figure-5.1: Maslow's Hierarchy of Human Needs and Related Aspects at Work



Source: Images from Google

Fredrick Herzberg proposed Motivation-Hygiene theory also known as the two-factor theory (Herzberg F., 1968). This practical approach received widespread attention for motivating employees. According to Herzberg's theory, a set of factors produce job satisfaction among employees at a workplace, and motivate them to utilize their full potential towards organizational goals achievement, known as Motivational Factors. Motivational factor include praise, recognition, and promotional opportunities as to motivate the employees for a superior performance. Fredrick also suggested that work itself should be meaningful, interesting and challenging; in addition ownership of the work should be transfer among workers with minimum control but retain accountability. In contrast, Hygiene Factors produce dissatisfaction among employees and negatively affect their job performance (this includes low/unreasonable pay, strict company policies such as inflexible working hours, short of holidays, outdated work equipments, poor social-physical work environment, Job insecurity for the workers etc) (Luthans, 1992). Victor H. Vroom introduced one of the widely accepted Expectancy Theory of motivation. ***"Expectancy theory suggested that people will act to satisfy their needs if they think their***

efforts lead to performance, that performance will lead to a specific outcome, and they value the anticipated outcome" (Bovee et al., 1993, p.p 447). Equity theory presented by J. Stacey Adam in 1965, theory suggested that people will be motivated towards superior job performance when they feel that they are being treated fairly or advantageously (Al-Zawahreh & Al-Madi, 2012). There are three basic components of equity theory such as inputs (i.e. education, skills, experience, time, efforts, personal sacrifices etc), outcomes (i.e. pay, security, recognition, promotions, development etc) and referents (i.e. other coworkers in similar situations). Social psychologist Douglas McGregor presented two possible views about human nature at the work place known as theory X and theory Y discussed as below. Theory X assumes that people are naturally lazy and will avoid work whenever possible (Kepuladze, 2010). To produce results these people need to be supervised, controlled, forced and threatened otherwise they have no incentive to work. This theory encourages an authoritarian style of management. Theory Y, on the other hand, assumes that people are naturally motivated to work; these peoples are creative, responsible and enjoy working. These employees accept their work as part of life and do not need much direction to produce results. This theory encourages de-centralized or participative style of management (Bovee et al., 1993). William Ouchi[29] developed theory Z. According to Z theory availability of suitable physical and social work environment, organization supports such as job security, promotions and freedom of work, develops sense of discipline and moral obligation to work harder this increase quality of the organizational services (Kepuladze, 2010).

5.3 Women and Motivation

Motivation is an important factor for the success of women at their professional career advancement because strongly motivated women can attempt and achieve their personal and professional goals (Shah, 1999).

[29] William Ouchi was born in 1943; he is an American professor and author in the field of business management.

In Higher Education Institutions (HEIs) women's self-motivation play an important role for their equal representation at academic and management cadre because strongly motivated women can fulfill the criteria for promotion (i.e. higher degree and research publications) and reached at senior academic and key management positions. Loughlin and Barling (2001) stated that women's self motivation has become of great importance today because undervaluing and misunderstanding of women's job motivation lead to underutilization of women's skills and experience and to loss of the resource.

Responsibilities of senior management and key decision making positions often demand more time and proper attention (Bovee et al., 1993). Therefore it is stated that the length of time that women prefer to spend for job is an important factor that affect their visibility at senior position in Higher Education Institutions (HEIs). Whereas, in Pakistani society in the context of culture and tradition women roles are different than men (see chapter one and two). Therefore, in Higher Education Institutions (HEIs) women prefer to avoid long and inflexible working hours (i.e. due to their coexisting domestic and reproductive roles). According to Farida (2010) particularly working women who are married and those who have young children may be facing work-burnout, job disruptions and avoid multi task at job.

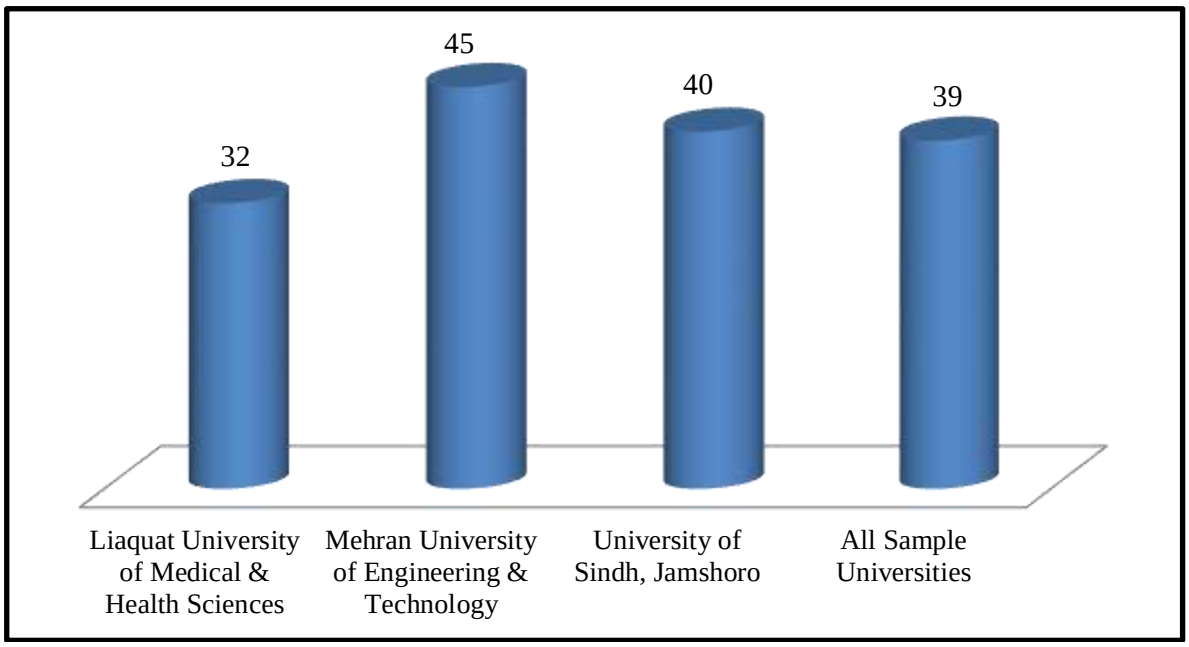
Physically and biologically women are different from men and suppose to be more sensitive by nature therefore, highly affected by different other factors such as work environment (Kepuladze, 2010). According to Berg et al., (1999) it is the quality of the employee's workplace environment (i.e. both physical and social) that most impacts on the level of employee's motivation and subsequent performance. In Higher Education Institutions (HEIs) work environment refers to available physical facilities to academic and management staff and the attitude or behavior of colleagues (Jennifer Rowley, 1996). In this connection it is stated that in Higher Education Institutions (HEIs) available physical facilities to women academic and management staff and the attitude or behavior of colleagues with them can influence their job performance.

5.4 Assessing Self-Motivation of Sample Women

At university level conferences, workshops and seminars provide opportunities to develop professional skills and abilities to share knowledge and experience in intellectual research environment. ***Organizing refers "to plan activities in efficient way" (Oxford Advanced Learner's dictionary, 2005, p.1071).*** Successful conferences organizing in higher education institutions required self motivation to devote time and energy simultaneously, required various skills this includes planning, analyzing, communication, collaborates with colleagues on team goals, decision-making and problem-solving skills including the ability to think quickly and react to last minute changes, and ability to prioritize and manage multiple tasks etc (Shah, 1999). In Higher Education Institutions (HEIs) faculty involvement in organizing events for their institution shows their self motivation to involve in management activities and indicate their potential to manage successfully and to achieve multitasks (Singh, 2002). Therefore to measure self- motivation of sample women to be participating in management activities; numbers of conferences organized by sample women selected as parameter (see chapter three, table 3.1 quantifying parameters).

Figure 5.2 demonstrates that particular proportion of sample women has self-motivation to devote their efforts and energy for management activities for their universities. On other side 60 percent sample women were reported without any conference organized by them throughout their professional career. Comparison of sample universities shows that sample women reported from Mehran University of Engineering & Technology and from University of Sindh, Jamshoro have more motivation to utilize their management skills and to achieve multitasks.

Table- 5.2: Trends for Organized Conferences by Women n=91 (%)



Source: Survey Data, 2012

5.5 Factors Affecting Self-Motivation of Sample Women

There are various factors that may affect women's motivation to perform multitask and equal participation with men at senior academic and decision making positions in sample universities in Sindh (see chapter three, table 3.1 quantifiable parameters). These factors analyzed as following.

5.5.1 Domestic Roles

Domestic activities suppose to be the women's responsibility either working women or house wife (see chapter two). Table 5.2 presents marital status of sample women. Data highlights that approximatly 73 percent sample women were married these sample have to perform multiple roles (including domestic work, children look after and child birth) beside their professional

responsibilites. More young cases reported from Mehran University of Engineering & Technology (MUET) therefore comparatively less proportion of married women reported from this engineering university.

Table-5.2: Respondents Marital Status n = 98 (%)

Material Status	Liaquat University of Medical & Health Sciences	Mehran University of Engineering & Technology	University of Sindh, Jamshoro	All
Unmarried	10	54.5	31.8	25.5
Married	88	45.5	68.2	73.4
Divorcee/Widow	2	-	-	1.1
All	100	100	100	100

Source: Survey Data, 2012

In table 5.3 data reveals that for house cleaning, cooking and other domestic activities 95 percent, 31 percent and 37 percent sample women respectively depends on maid. One fourth sample women have family support for maintenance of food for family. However, 44 percent sample women manage cooking and other domestic activities (this includes dishwashing, dry-cleaning etc) themselves. This indicates that after performing duty hours, sample women have to devote their time and efforts for domestic activities. Loughlin and Barling (2001) said that women spend more hours on performing housework and childcare than their husbands therefore, less motivated to reach up to leadership and decision making positions. Comparative data

analysis shows that female respondents reported from Mehran University of Engineering & Technology have more family support in house management activities, because majority of respondents in this engineering university were unmarried. This reveals that married working women remain more involved in managing the house.

Table-5.3: House Maintaining Activities n=98 (%)

Person Who Look After	Liaquat University of Medical & Health Sciences			Mehran University of Engineering & Technology			University of Sindh, Jamshoro			All Sample Universities		
	1	2	3	1	2	3	1	2	3	1	2	3
Maid	96	38	52	92	18	23	96	36	37	95	31	37
Self	2	54	42	4	32	45	_	46	45	2	44	44
Family Members	2	8	6	4	50	32	4	18	18	3	25	19
All	100	100	100	100	100	100	100	100	100	100	100	100

Source: Survey Data, 2011-12

- 1=House Cleaning
- 2=Cooking
- 3=Other Domestic Activities

Table 5.4 evaluates the sample women in the context of their childcare responsibility. Data indicate that 48 percent children of sample women were more than ten years old and able to look after themselves. 52 percent children of sample women were under 10 years old and sample respondents depend on nanny/family members for look after their kids when they are at job. However, as mothers these sample women have to devote more time and energy for look after their young children.

Table-5.4: Respondents' Children Look After by Source n = 65 (%)

Sample Universities	Numbers of Children	Age Group	Percent for Age Group	Source in Percent			
				Nanny	Family Members	Children Themselves	All
Liaquat University of Medical & Health Sciences	91	<5	13	83	17	_	100
		5--10	13	42	58	_	100
		> 10	74	3	_	97	100
Mehran University of Engineering & Technology	7	<5	57	_	100	_	100
		5--10	43	_	100	_	100
		> 10	_	_	_	_	100
University of Sindh, Jamshoro	65	<5	12	85	15	_	100
		5--10	20	30	70	_	100
		> 10	68	5	15	80	100
All Sample Universities	163	<5	27	56	44	_	100
		5--10	25	24	76	_	100
		> 10	48	4	8	88	100

Source: Survey Data, 2012

5.5.2 Working Hours

The length of time that women prefer to spend for job is an important motivator that may affect their visibility at senior management position in Higher Education Institutions (Nadya & Romila, 2011).

Table-5.5: Trends for Hours Spent for Job in a Day by Women n = 98

Statistical Measures	Liaquat University of Medical & Health Sciences	Mehran University of Engineering & Technology	University of Sindh, Jamshoro	All
Mode	6	6	6	6
Minimum	5	5	5	5
Maximum	8	7	7	8
Standard Deviation	0.402	0.309	0.375	0.374

Source: Survey Data, 2012

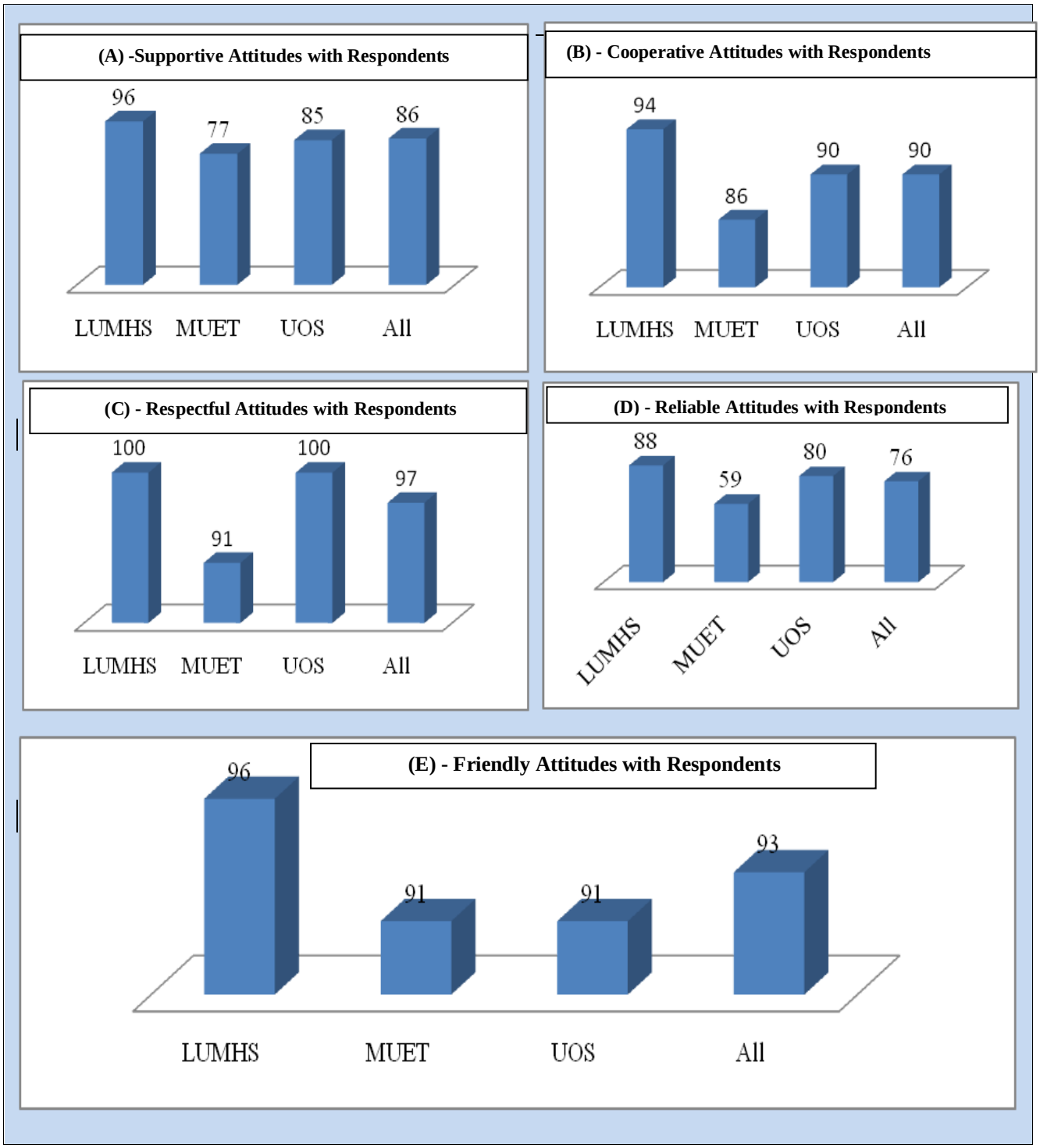
Table 5.5 presents the statistical measures for the amount of hours that women academic and management spend at their jobs at per day. The value of mode (i.e. 6) and small value of standard deviation (i.e. 0.374) indicate that sample women' working hours per day were not very large in universities in Sindh. However, maximum hours (i.e. 8) revels that some academic and management staff (particularly Dean and Personal Secretary to Vice-Chancellor reported from Liaquat University of Medical and Health Science) spends long hours for their job in a day. Head of the department/chairperson/director etc co-operate with sample women as for childcare or

family issues therefore some cases spend only 5 hours per day for their job. Top and middle management positions also demands long hours but due to domestic responsibilities 43 percent sample women could not agree to devote longer hours at job. In addition, due to domestic responsibilities these women also not able to devote their time for qualification up gradation and for other research activities (such as research publications). This indicative that women who are more involved in personal domestic issues shows less professional attitude in Higher Education Institutions (HEIs).

5.5.3 Work Environment

Work environment refers to working conditions it includes physical and social environmental conditions (Work Environment from ISO 9000, 9001, and 9004 Plain English Definitions). In the connection of review literature (i.e. discussed previous in this chapter) it is stated that work environment may have positively/negatively influence on the job performance of sample women. Therefore, available physical facilities and behavior of colleagues with sample women was selected to analyze (see chapter three, table 3.1 quantifiable parameters) and presented as following. Figure 5.3 shows people's attitudes with women respondents in sample universities. Data reveals that 86 percent sample women feel that work environment is helpful and encouraging. Whereas, there were some one who did not get required support from their colleagues. 90 percent sample women feel cooperative and social work environment at their work place; this indicates that all staff members work together like a team. 97 percent sample women feel respectful work environment this is indicative that top administrative staff, subordinates and other colleagues behave with respect or in fairly good manner with them. 76 percent sample women feel that they can trust on other colleagues to work well with them in any circumstances, however, very prominent ratio of women believes that attitudes of people around them in sample universities were not reliable.

Figure-5.3: People's Attitudes with Women in Universities n=98 (%)



Source: Survey Data, 2012

- UOS=University of Sindh, Jamshoro
- LUMHS= Liaquat University of Medical and Health Sciences
- MUET= Mehran University of Engineering and Technology

Large proportion (i.e. 93) feel friendly atmosphere at work place, it is mentioned because of pleasant behavior of staff members which make them relax. Furthermore, the comparative analysis indicate that in a male dominating sample university (i.e. Mehran University of Engineering and Technology) women were not fully satisfied with the attitudes of their top management, subordinates and other staff members. It is mentioned because 40.9 percent, 22.7 percent and 13.6 percent working women believes that their staff members are not reliable, not supportive and not cooperative respectively. This indicative that social environment in male dominating in universities is not in favor of women which may negatively affect their progressive activities or their representation at academic and management cadre.

Table-5.6: Available Physical Facilities to Women in Universities n = 98 (%)

Available Physical Facilities	Liaquat University of Medical & Health Sciences	Mehran University of Engineering & Technology	University of Sindh, Jamshoro	All Sample Universities
Comfortable Room (i.e. for rest in between long working hours)	18	64	41	41
Equipments (i.e. operational equipments etc)	92	100	96	96
Separate Office with Working Facilities (i.e. Computer etc)	64	91	91	77
Transport Facilities	100	100	100	100

Source: Survey Data, 2012

- In sample universities particular proportion of sample women also working in double shifts (i.e. morning and evening)

Figure 5.6 shows available physical facilities to women respondents in sample universities. Data revels that sample women were overall satisfied with the availability of transport facility and required equipment (i.e. medical instruments etc) to do their work. Separate office with working facilities (computer, internet etc) is necessary in order to promote research culture among faculty

members however, 23 percent sample women not had separate offices, this indicates that universities may not give proper attention to motivate their women faculty towards research besides their regular teaching activities. Sample universities also offer graduates and post graduate programs in evening and academic and management staff, in a particular proportion, is working from morning to evening shifts. Similarly, in medical field faculty members also working in attached hospital where working hours often remain long and unpredictable, this situation requires room for rest in between long working hours, particularly for women staff members. But 59 percent women respondents reported that rooms for rest between long working hours are not available for them. In addition, researcher observed during field survey that the available rooms for rest particularly for women in medical university were not tidy and usable.

Comparative data analysis and researcher personal field observation explore that in Liaquat University of Medical & Health Sciences (LUMHS) women faculty members were most dissatisfied with poor workplace design (this includes privacy needs to do research and insufficient workspace etc) it is mentioned because in some departments many women academics were accommodated within one office which was not sufficient for them. In Mehran University of Engineering and Technology (MUET) all most all women academics had computer/laptop in their offices with internet and telephone extension facilities. This is the indication of serious attitudes of engineering university's management (i.e. management of Mehran University of Engineering and Technology) towards proper development and utilization of their available human resource. In University of Sindh, Jamshoro (UOS) physical work environment particularly for women academic and management staff is not worst but need to improve more. Proper concentration for reading and writing (besides other facilities) demands noise free environment but available offices/cubicles were not noise proof. Again this problem is more prominent in Liaquat University of Medical & Health Sciences (LUMHS) and University

of Sindh, Jamshoro (UOS) while in Mehran University of Engineering and Technology (MUET) majority of faculty offices were designed as sound proof (i.e. with glass doors).

To sum up, motivation is the driven force which can make a staff efficient at work therefore; over past decades various researchers worked on motivation and develop various theories on motivation. Women's self motivation can play significantly role for their professional success career advancement. Self-motivation to perform multiple responsibilities has significant impact on women representation at management cadre in Higher Education Institutions (HEIs).

Study results highlights that 60 percent sample women were reported without any conference organized by them throughout their professional career therefore, underrepresented at middle and top management levels in universities in Sindh. Working women have to devote their time and energy for both domestic and professional roles therefore women try to avoid long working hours and prefer to short and flexible work arrangements. On other side at university level top and middle management positions also demands higher qualification and long hours. Study results shows that 43 percent sample women also devote their time and energy for domestic activities and child care therefore, could not agree to devote longer hours at job and for qualification up gradation. These sample women availing short and flexible work arrangement and like to get only in teaching. Women are soft and emotional in nature therefore prefer to better work environment. Therefore, social environments/interpersonal relationships and better physical facilities can play more positive role in order to get women's full contribution in Higher Education Institutions (HEIs). In sample universities in Sindh social work environment for sample women were up to some extend seems to be better. However, 24 percent sample women not feel reliable social environment in sample universities in Sindh. This trend is more prominent in male dominating in Higher Education Institutions (HEIs). On account of physical work environment sample women not satisfied with availability of rooms for rest during long working

hours and separate offices were also not available to 23 percent sample women. Therefore, it is stated that poor physical facilities and unreliable social environment in public universities in Sindh less motivate women to participate side by side with men at management cadre in Higher Education Institutions (HEIs). In the light of above conclusion researcher can easily end up with view that there are various direct and indirect factors less motivate sample women to equal participation at academic and management cadre in universities/degree awarding institutions in Pakistan.

5.6 Decision Making

The term decision refers to "a choice or judgment that make after thinking and taking about what is the best thing to do" (Oxford Advanced Learner's Dictionary, 2005, p.359) whereas, decision making is the deciding about the importance, especially in group of peoples (Syed, 1992). According to Bovee et al. (1993) decision making is a most essential part of management (see chapter two). Manager has to make many small and huge decisions about planning, leading, controlling, organizing, motivation, innovations, implementation etc therefore, decision making also consider as management itself. Good decision-making is goal oriented process, based on reliable information (Luthans, 1992). In addition, taken decision needs to be communicating for suitable follow-up actions. Decision-making process involves many steps in a logical manner which required proper time and consideration by decision maker (Siddiqui, 2003).

Table 5.7 presents the six steps required to take rational decisions (which follows the classical decision making model) in the decision making process as well as identify required key skills and abilities for result oriented decisions.

Table-5.7: Steps of Decision-Making Process & Required Key Skills & Abilities

Steps of Decision-Making Process	Required Key Skills & Abilities
Problem Identification	Analytical & Communication Skills
Development Alternative Solutions	Analytical Skills & Goal Setting Abilities
Evaluation of Alternative Solutions	Analytical & Communication skills
Selection of Alternative /Make Decision	Analytical & Communication skills
Decision Implementation	Leading, Motivating & Communication skills
Results Evaluation/Feedback	Analytical & Communication skills

Source: Luthans (1992), Syed (1992), Bovee et al., (1993) & Siddiqui (2003)

As the first step of decision-making process decision maker has to define and analyze the nature of the problem in depth. At decision making position manager has to observe the changes, consider the causes of real issue and then have to diagnose the real problem. After the problem has been defined, diagnosed the next step is to obtain the relevant data about the issue for create the clear picture of all aspects of the problem. Next step is the generation and then selection of most realistic alternative courses of action that could be used to solve the phenomena. The selected alternative must be communicated to the related peoples and must be accepted by related persons. After that, decision maker have to convert selected decision into an effective action through her effective leadership because without effective action, the selected decision will remain a good intention. Here, the manager has to take her subordinates in confidence and should convinced them about the correctness of the decision. Feedback helps to manager to decide whether the taken decision should be continued or to be modified. Therefore manager has

to check the effectiveness of the decision as feedback; it can be possible through personal observations, organized information and reports.

5.7 Women and Decision Making in HEIs

In Higher Education Institutions (HEIs) decision-making is a primary as well as an essential function of management process which exists in all levels of management (Tanvir- uz- Zaman, 1998). In Higher Education Institutions (HEIs) decision-making is necessary to face the dynamic challenges, it also facilitates the overall management process (Isani, and Virk, 2003). Women participation at management cadre in higher education institution required particular skills to identify aims and objectives of higher education institution and abilities to formulate the policies and strategies to achieve settled goals of educational institution (Singh, 2002).

Decision-making is a responsible job in higher education institutions because long period goals of Higher Education Institutions (HEIs) related to develop and train highly qualified professionals for the socio-economic development of a country (Shaid, 2004). According to Syeda et al., (2006) women by nature have greater endurance and patience so women managers can perform better to achieve long-term tasks; these women have ability to plan and achieved settled objectives. Goals of universities are very sensitive related with teaching and research and weak decisions negatively affect the goals of the institution. Shah (1999) found that women decision makers are organized, disciplined, focused to vision, considerate, hard work and better in internal management. In Higher Education Institutions (HEIs) decision maker have to take decisions about policy formulation, administrative matters that required realistic approach. Hasan & Othman (2012) stated that women have ability to think logically and more responsive to the information and feedback received from others. In Higher Education Institutions (HEIs) decision maker have to take decisions about utilization of all resources such as equipments, finance, and

qualified staff. Therefore, women decision-makers should be matured, experienced and well qualified (Shah, 1999). Human resource occupied most important place in higher education institutions as both, input as well as output and manager or decision maker largely related with human resource utilization that required expertise to manage peoples (Zaman, 1998). Eagly & Carli, (2003) found that women have participated management style and prefer to share the credit with her colleagues which develop the healthy working environment and keep their subordinates together to achieve goals. Hasan & Othman (2012) stated that women manager occupied significant communication abilities and has potential to mentor, to motivate and encourage their subordinates.

5.8 Women Decision Maker/Leader

Since past centuries across the world women successfully lead their countries, political parties, and business organizations, they also truly participated at policy formulation and decision making positions in government and non-government sectors. Hazrat Ayesha (RA), Bi Bi Khuteja (RA), and Hazrat Zainab (RA) are the classical Islamic role models as perfect decision maker. The other heroic leaders of the nations involved conquering and changing the world, they devoted themselves to remove violence and put their nations in sate of peace and stability. The few such great women leaders discussed as below.

5.8.1 Women Political Leaders

History shows that the numerous women across the world occupy thrones, led governments and tribes. They have started and ended wars, governed nobly as well as savagely. These women political leaders had significant impact on the politics of their region as a whole and suppose to be the inspiration to women all over the world. Queen of England Elizabeth I (1533-1603) was

ruled on England and Ireland from 1558 until the day she died. Elizabeth I was one of the successful women rulers in history. She ruled quite well and never depended on a King in order to make her decision therefore she was also known as Virgin Queen. Elizabeth I set the model for a women leadership, she proved that women are able to lead the nation and ruled the state like a King or other male heirs (John, 1990). Razia Sultana (1205-1240) was the talented, wise, brave, and generous daughter of king Shams-ud-din Iltutmush. In South Asia she was the first muslim women who ruled on the throne of Delhi. Razia Sultana was great administrator in government affairs on other hand; she was excellent fighter and trained to lead armies in the battlefield (Gabbay A., 2011). Indira Priyadarshini Gandhi (1917-1984) was the daughter of Jawaharlal Nehru who was the central figure in Indian politics. She was one of the longer serving prime minister of India. She joined Indian National Congress Party in 1938 and she was elected to Parliament as Prime Minister in 1966 and in 1980. As prime minister of India, Indira Gandhi led her country towards political, economical, and military developments in the world. She made lasting changes to the constitution of India. Indira Gandhi's was a brave and bold decision maker; against terrorism she took forceful actions as to storming the Golden Temple in Amritsar. As result of her bold decision, in 1984 Indira Gandhi's assassinated by her own Sikh bodyguards (Indira Gandhi from Wikipedia, The Free Encyclopedia). Mrs. Sirimavo Bandaranaike (1916-2000) was the active political figure in country Sri Lanka. She was the world's first elected woman Prime Minister. She had the distinction of becoming the Prime Minister of Sri Lanka for three times (i.e. from 1960 to 1965, 1970 to 1977 and 1994 to 2000). She gave four decades in politics leadership to the Sri Lanka (Ruth, 2009).

In Pakistan women leadership roles before and after the independence of the country cannot be denied. Fatima Jinnah (1893-1967) was an active political woman in the independence movement of Pakistan. She was the contest the presidency in 1965, as a candidate of the Combined Opposition Party. Due to her devotion for Pakistan, the nation conferred upon her the

title of Madar-i-Millat, or “Mother of the Nation” (Shahid, 1995). Benazir Bhutto (1953-2007) is a symbol of powerful and great women leader of the nation Pakistan. She led the country's major political party (i.e. Pakistan People’s Party) with a profound vision. She graduated from Oxford University after becoming the first Asian woman to be president of the Oxford Union, a debating society. At the age of 35 years she becomes the first women prime minister of a Muslim State and was also Pakistan's first and thus far, only women prime minister. She had the distinction of becoming the Prime Minister for two times (i.e. from 1988 to 1990 and from 1993 to 1996). Benazir Bhutto made their contribution to education, politics, women empowerment and social welfare, this great woman have not ever forgotten in the history of mankind (Benazir Bhutto from Wikipedia, The Free Encyclopedia).

5.8.2 Women Business Leaders

Women played significance role in business culture or in economy, their influence were felt across many sectors of business. Even during the period of nation’s infancy in many pockets of world where women were not permitted to vote and to own land, their contribution as decision maker to the big business cannot be deny. Khadija bint Khuwaylid (555–619 CE) was the successful women business leaders in the Arab. She was the first wife of the Prophet Mohammed (Peace Be Upon Him). Bi Bi Khadijah inherited a big business and vast amount of wealth after the death of her father. Bi Bi Khadijah was a wise woman in decision making and posses great abilities to lead therefore; she successfully managed her business and become successful business woman in the Arab. She exported her goods to far away markets like Syria and her managers bought goods from those markets to be sold at home (Manal 2012). Eliza Lucas Pinckney (1722–1793) developed cash crops and this cultivation boosts her business. She was most successful in processing dye with the expertise of a black indigo-maker of African descent. Due to her professional successes, indigo became the second-largest crop in the state South

Carolina. At very young age, Eliza became a businesswoman; she had a major impact on the economy in colonial South Carolina (Schulz, 1991).

Gabrielle (Coco) Chanel (1883 -1971) belong to France, she started her business with one hat shop in Paris in 1910 and becomes the great fashion designers and fascinating women entrepreneur in the 20th century (Picardie, 2010). Maria Das Graças Silva Foster (1953) is a Brazilian business executive and chemical engineer. She is known as the Chief Executive Officer (CEO) of Petrobras-Petróleo Brasil, Brazil's state-controlled oil company. She is the first woman in the world to head a major oil-and-gas company. She is supposed to be the influential and powerful woman in the world. She also served as Vice President, President and members of the Board of Directors in various organizations (Maria Das Graças Silva Foster from Wikipedia, The Free Encyclopedia).

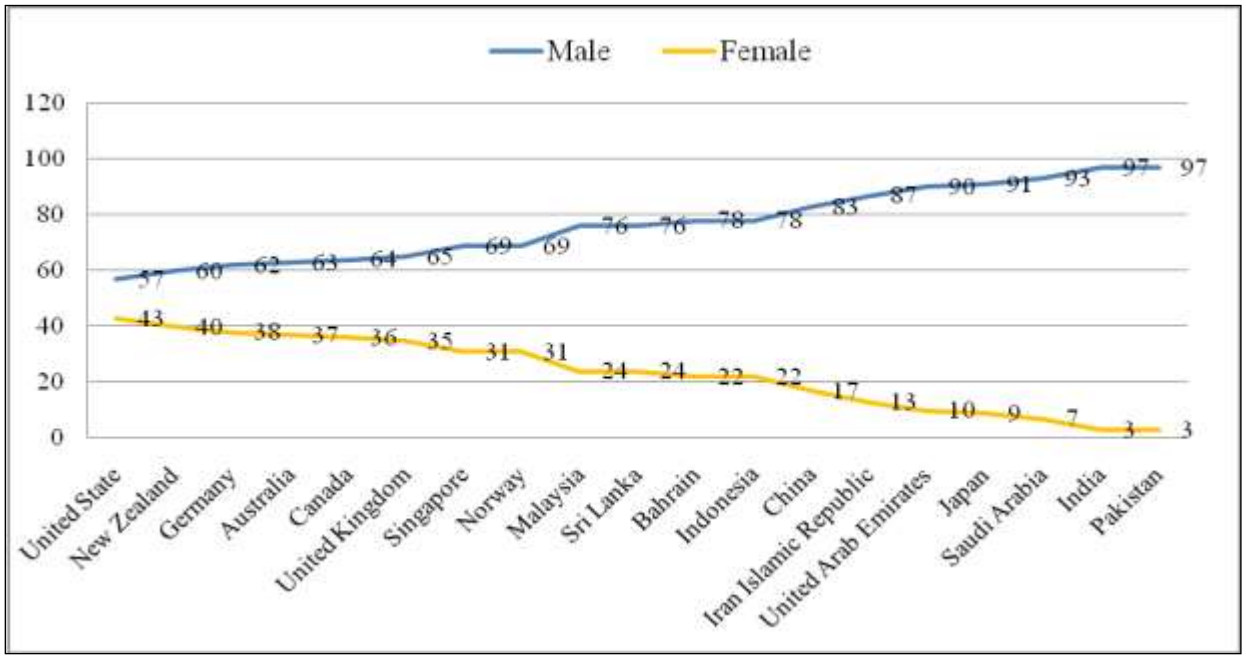
5.9 Women in Decision Making Process

Women's truly involvement in all sectors of economy of the world and performing various tasks to achieve but still underrepresented at policy formulation and decision-making positions (Gender Gap Report, 2011). According to European Commission Justice (2011) in most European Union member states women make up nearly half the workforce and more than half of new university graduates but under-represented at the highest levels decision-making positions. According to United Nations (2010) although today women have access into various traditionally male-dominated professions (this include engineering, banking, etc) but women still long away from equal participation with men in leadership and decision making positions.

Figure 5.4 highlights unequal gender representation at legislator, senior official and manager positions among all reported developed and underdeveloped countries. In Pakistan at policy level government makes efforts to boost women representation at senior decision making level (such

as introduce women quota in the national parliament) but gender inequality still exists at legislator, senior official and manager positions.

Figure 5.4: Male-Female as Legislators, Senior Officials and Managers (%) n= 19



Source: World Economic Forum, 2011

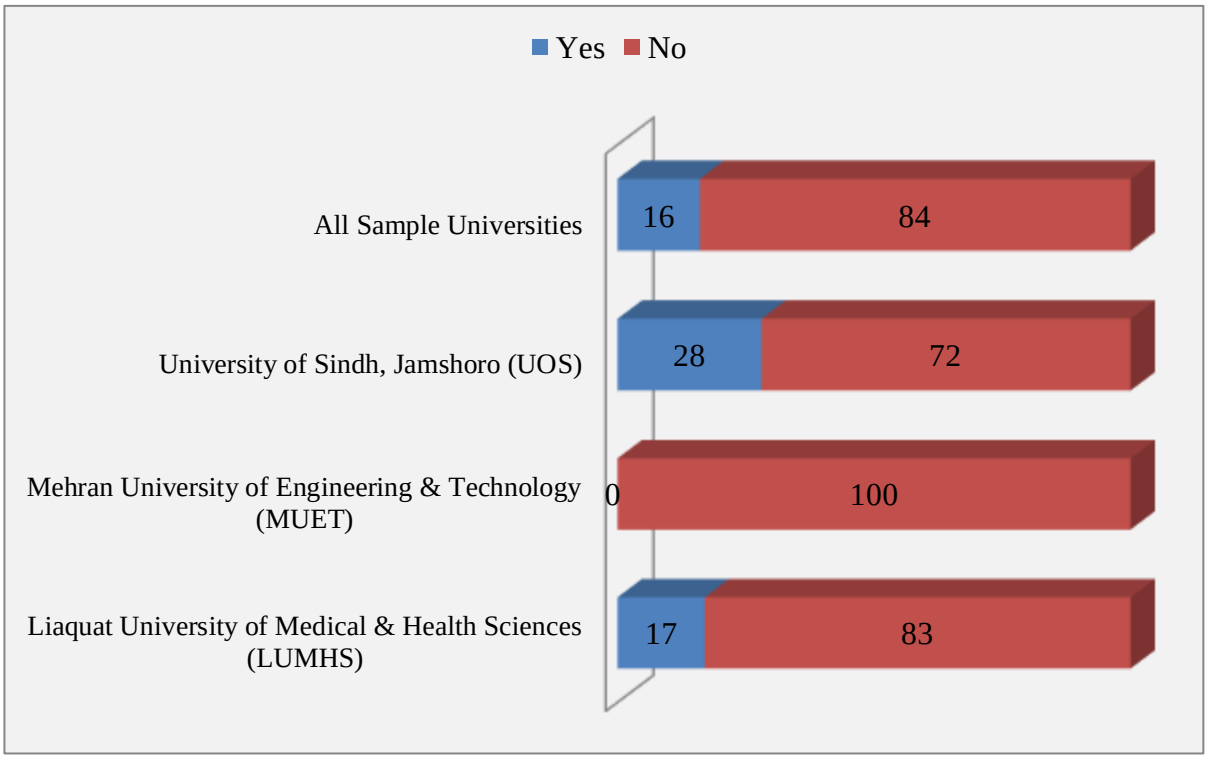
Women's weak motivation to devote their time and effort to high profile management posts, due to their domestic responsibilities are the major reasons for the gender gaps between at management positions (International Labour Office (2004) ILO, 2004). Furthermore, socio-economic norms, religious believes, undermine women education status restricted women to work at key decision making positions (see chapter two).

5.10 Administrative Status of Sample Women

Decision making is part of management whereas administration or management can use interchangeably (see chapter two). Women administrative status selected as parameter (see

chapter three table 3.1 quantifiable parameters) to analyze sample women participation ratio in sample universities in Sindh. In sample public higher education institutions in Sindh women performed their duties at both academic and management cadre.

Figure- 5.5: Trends for Having Administrative by Women n= 91 (%)



Source: Survey Data, 2012

Figure 5.5 highlights the extent at which sample women perform their role at top and middle level of management along with teaching. Data indicates that sample female not encouragingly represented at management cadre (i.e. 17 percent). Furthermore, not a single case registered from Mehran University of Engineering & Technology (MUET) who worked at top or middle management level along with teaching.

5.11 Assessing Decision Making Skills and Abilities of Sample Women

Decision making skills and abilities of sample women may affect their representation at administrative or decision making positions in sample universities in Sindh. Therefore decision making skills and abilities of sample women were analyzed and presented as below.

5.11.1 Educational Qualification

The study parameter educational qualification (see chapter three table 3.1 quantifiable parameters) used to measure the level of education degree of sample women. According to Higher Education Commission of Pakistan rules and regulations, degree advancement is one of the require criteria for faculty members as to promote at senior teaching positions and to work at key decision making level (Higher Education Commission of Pakistan Official Website, 2014). In Liaquat University of Medical Health Sciences (LUMHS), University of Sindh, Jamshoro and in Mehran University of Engineering & Technology (MUET) sample women upgraded their qualification at Ph.D level but in some departments of Liaquat University of Medical Health Sciences (LUMHS) (such as in Peds, Surgery, Obstetrics-Gynecology) rather than PhD doctors have to upgraded their qualification with specialization course (such as Fellowship of College of Physician and Surgeon (FCPS)[30] and Fellowship of Royal College of Surgeon (FRCS)[31] in order to reach at senior academic and key decision making position. In all sample universities in Sindh graduation/masters are the minimum criteria to be appointing as lecturer.

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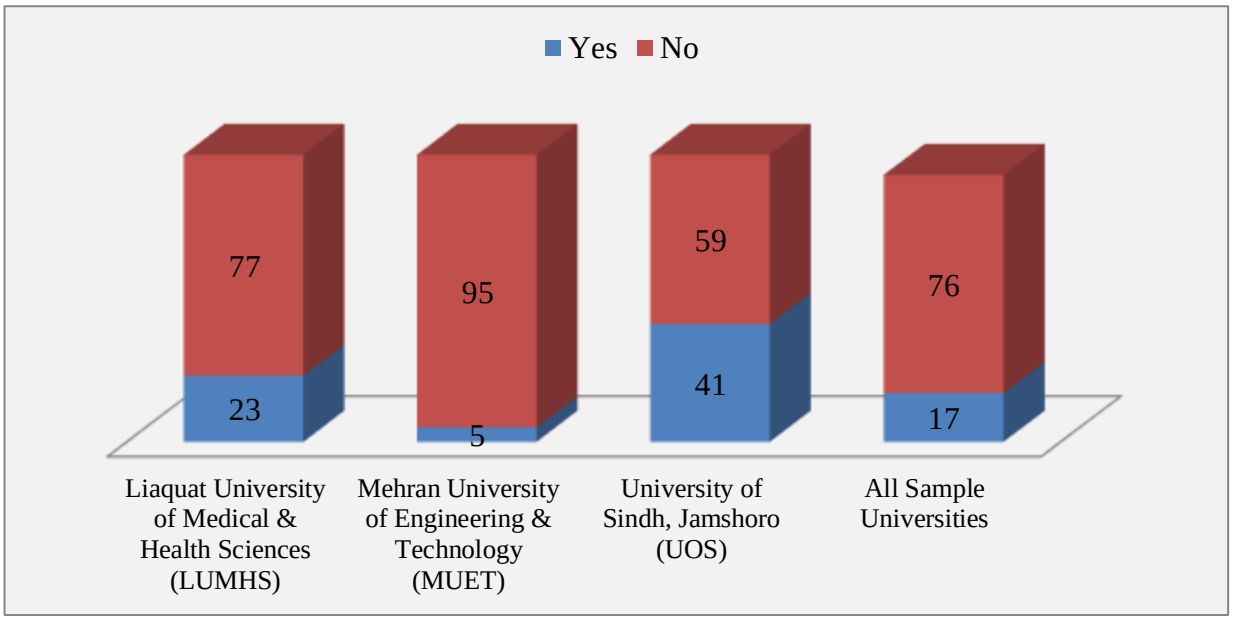
[30]Fellowship of College of Physician and Surgeon (FCPS) is a postgraduate degree awarded by College of Physicians & Surgeons Pakistan upon completing specific years of training and passing the examination in specific specialty.

[31]Fellowship of Royal College of Surgeon (FRCS) is a professional qualification to practice as a surgeon anywhere in Ireland or the United Kingdom.

Figure 5.6 indicates that after appointing as lecturer, only 17 percent sample women upgraded their qualification at PhD/Specialization level. In Mehran University of Engineering & Technology (MUET) majority of sample respondent were young their qualification up gradation is in process therefore only 5 percent sample women reported with having PhD degree. In University of Sindh, Jamshoro 41 percent sample women upgraded their qualification at PhD level that is encouraging.

Figure-5.6: PhD/Specialized Sample Women n=91 (%)



Source: Survey Data, 2012

5.11.2 Experience

Experience is defined ***as "active participation in events or activities, leading to the accumulation of knowledge or skill" (The Free Dictionary by Farlex, from Google).*** Parameter experience (see chapter three table 3.1 quantifiable parameters) in this chapter explains the numbers of years sample women worked in their related fields. According to Higher Education Commission of Pakistan eligibility criteria, experience is also required in order to promote faculty members at senior teaching and management positions level (Higher Education

Commission of Pakistan Official Website, 2014). Table 5.8 highlights that in sample universities in Sindh 61 percent sample women reported with having less than 15 years (i.e. sum of 42, 11 & 8)of experience in their related fields (i.e. at academic and management positions). Due to immaturity by age approximately 86 percent (i.e. sum of 59 & 27) sample women reported from Mehran University of Engineering & Technology were less experienced (i.e. up to 10 years) at their academic and management status.

Table-5.8: Years of Experience in Present Job n=98

Years of Experience	Liaquat University of Medical & Health Sciences	Mehran University of Engineering & Technology	University of Sindh, Jamshoro	All
Under 1-5	38	59	32	42
6-10	6	27	4	11
11-15	6	9	14	8
16-20	28	5	23	21
Above 20	22	-	27	18
All	**100**	**100**	**100**	**100**

Source: Survey Data, 2012

Therefore, it is stated that sample women reported from Liaquat University of Medical & Health Sciences and from University of Sindh, amshoro are more experienced at their academic and management status.

5.11.3 Age

Age is known as ***"the number of years that a person has lived or a thing has existed, or a particular period of a person's life, or a particular period of history" (Oxford Advanced Learner's Dictionary, 2010, p.28).*** The study parameter age (see chapter three, table 3.1 quantifiable parameters) refer to the years that sample respondent has been lived.

In table 5.9 valus of average age (i.e. 40 years) and value of standard deviation (i.e. 8.37) indicates that majority of women were not matured by age in sample universities in Sindh. The lowest values of average age (i.e. 32) and standard deviation (i.e. 3.672) for Mehran University of Engineering & Technology (MUET) indicative that majority of sample women in this engineering university were young therefore become less experienced. However, majority of young respondents reported from engineering university, this leave hope to see more women at senior academic and management in future.

Table-5.9: Statistical Measures of Women Age n= 98

Statistical Measures	Liaquat University of Medical & Health Sciences	Mehran University of Engineering & Technology	University of Sindh, Jamshoro	All
Mode	39	30	50	39
Minimum	29	29	28	28
Maximum	60	43	59	60
Standard Deviation	6.913	3.672	9.648	8.367
Average	42	32	43	40

Source: Survey Data, 2012

5.11.4 Goal Setting Abilities

The goal setting is ***"the process of deciding on something you wants, planning how to get it, and that is progressively worked towards" (Goal Setting Glossary from Google). "Goal setting involves establishing specific, measurable, achievable, realistic and time-targeted objectives" (Goal Setting, from Wikipedia Free encyclopedia).*** The goal oriented women focus her energy and attention towards a specific outcome, which makes a powerful process of planning for the task achievement (Luthans, 1992). In this connection it is stated that sample women's strong

ability to plan and potential to develop specific challengeable objectives that can be successfully achieved play important role that make them successful at management cadre in Higher Education Institutions (HEIs). Therefore, the study parameter goal setting is designed to measure the goal setting abilities of sample women on five-point likert scale (see chapter three, table 3.1 quantifiable parameters).

Table-5.10: Goal Setting Ability of Working Women n= 98 (%)

Statements	Liaquat University of Medical & Health Sciences					Mehran University of Engineering & Technology					University of Sindh, Jamshoro					All Sample Universities					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	All
I feel I have strong ability to plan the future	22	62	4	12	_	45.5	50	4.5	_	_	54.5	36.5	4.5	4.5	_	40.7	49.5	4.3	5.5	_	100
I feel I have great potential to develop specific challengeable objectives that can be successfully achieved	26	66	4	4	_	36.3	45.5	18.2	_	_	40.9	54.6	4.5	_	_	34.4	55.4	8.9	1.3	_	100

Source: Survey Data, 2012

- 1=Strongly Agree
- 2=Agree
- 3=Undecided
- 4=Disagree
- 5=Strongly Disagree

Table 5.10 presents the goal setting abilities of sample women, data highlights that 90 percent sample women (i.e. average of 90.2 and 89.8 percent agree and strongly agree combined) positively response on account of having ability to plan the future and to develop measurable and time targeted objectives. This confirmed that sample women having ability to equally participate with men at decision making positions in Higher Education Institutions (HEIs).

5.11.5 Analytical Skills

Analytical skills are the required criteria for effective decision making practice (Varma & Aggarwal, 2009). Analytical skill is the ability ***"to examine the nature or structure of problem by logical method of thinking especially by looking all parts separately" (Oxford Advanced Learner's Dictionary, 2005, p.49). "Analytical skill is the ability to visualize, articulate and solve both complex and uncomplicated problems, concepts and make decisions that are sensual based on available information" (Analytical Skill, From Wikipedia Free Encyclopedia).*** An analytical decision maker consider all the relevant information or facts about particular issue (such as legal matters, available resources etc) before makes a decision or solving a problem (Shah, 1999). Therefore, it is stated that analytical skills allow a women decision maker to better understand issues and find outcomes that are relevant. When a women decision maker is able to see a situation for what it really is and then understand the factors and everything that is involved in it, she will have a more rational approach in finding a solution for it. In the end, decision maker will be able to make decisions that will be the most beneficial (Hasan & Othman, 2012). In this connection it is stated that women's analytical skills shows that women are competent to professionally work at key decision making positions in Higher Education Institutions (HEIs). Therefore, the study parameter[32] analytical skill was designed to measure the sample women's ability to recognize and analyze a problem, understand their context and to take everything in consideration before makes a decision (see chapter three, table quantifiable parameters). Table 5.11 analyzes the sample women's analytical skills, data revels that 92.7 percent sample women (i.e. strongly agree and agree combined) have strong ability to articulate. This indicates their ability to relate different parts of a matter so that solution of a problem is possible.

[32]A parameter is a measurable factor that states something about the entire population being studied. A parameter is an important element to take into consideration for the evaluation or for the comprehension of an event, a project or any situation.

Table-5.11: Analytical Skills of Working Women n= 98 (%)

Statements	Liaquat University of Medical & Health Sciences					Mehran University of Engineering & Technology					University of Sindh, Jamshoro					All Sample Universities					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	All
I think I have strong ability to articulate	32	64	2	2	_	36.4	59.1	4.5	_	_	27.3	59.1	4.5	9.1	_	32	60.7	3.6	3.7	_	100
I consider all the facts about organization before makes a decision	16	82	_	2	_	50	50	_	_	_	40.9	59.1	_	_	_	35.6	63.7	_	0.7	_	100

Source: Survey Data, 2012

- 1=Strongly Agree,
- 2=Agree,
- 3=Undecided,
- 4=Disagree,
- 5=Strongly Disagree

99.3 percent sample women (i.e. strongly agree and agree combined) reported having potential to analyze and to consider regarding decision making practices, this indicates that sample women have ability to use a logical method of thinking in-order to understand nature of problem and to make a decision.

5.12 Applying Logistic Regression for Predicting Women Administrative Participation

Logistic regression is a technique for making predictions (Jeffrey, 2012). In this chapter Logistic regression (see chapter three) is applied to predict the women administrative participation in Higher Education Institutions (HEIs). In this chapter logistic regression also used to analyze the impact of degree advancement, experience and self motivation on women representation at top and middle management levels in sample universities. Therefore, sample women's administrative status was selected as dependent variable (i.e. Y) and sample women according to their administrative status divide into two categories one is having administrative status along with teaching and second category is not having administrative status along with teaching. Dependent variable is binary (see chapter three) therefore, code "1" allocated for having administrative status along with teaching and "0" allocated for otherwise.

To find out impact of degree advancement on women representation at management cadre in Higher Education Institutions (HEIs) educational qualification selected as predictor variable (i.e. X_1) and sample women were categorized into two categories as PhD/Specialization and Non PhD/Specialization. Independent variable educational qualification is categorical variable[33] therefore, code "1" allocated for PhD/Specialization and "0" for Non-PhD/Specialization. To find out impact of experience on women representation at management cadre in Higher Education Institutions (HEIs) numbers of years in job selected as predictor variable (i.e. X_2). Experience is independent variable that is quantitative (see chapter three) and measured in numbers of years. In order to analyze the impact of self motivation of sample women as to devote their time and efforts for management activities, numbers of conferences organized by sample women selected as independent variable (i.e. X_3). Numbers of conferences organized by sample women (i.e. X_3) is quantitative variable (see chapter three) and measured in number of years.

[33]Any variable that is not quantitative, having two or more groups is categorical variable.

Logistic Regression Equation

$$\mathbf{Y= B_0 + B_1X_1 + B_2X_2 + B_3X_3}$$

Where:

Y = Binary Dependent Variable (i.e. Administrative Status of Sample Women)

1 = for having administrative status along with teaching

0 = Otherwise

b_0 = Intercept/Constant

b_1 b_2 b_3 = Coefficient

X_1= Educational Qualification

1= PhD/Specialization

0 = Non-PhD/Specialization

X_2 = Experience

X_3 = Numbers of Conferences Organized

Y = -5.473 + 1.749 (Qualification) + 0.142 (Experience) + 0.183 (Self-Motivation)

Table-5.12: Model Summary

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
38.693	.352	.610

Source: Survey Data

According to table 5.12 smaller value for Minus 2 Log Likelihood (i.e. 38.693) in this model confirmed goodness of the model (see chapter three). Cox and Snell R^2 cannot reach the maximum value (see chapter three) therefore; Nagelkerke's R^2 used in this logit model having the value 0.61. The value of Nagelkerke's R^2 indicates that 61 percent of the variation in the administrative status of sample women (i.e. dependent variable) is explained by this model.

Table 5.13 presents the empirical results for variables in the equation. Constant is the expected value of dependent variable when all of the predictor variables equal zero (Verbeek, 2004). Negative value of constant (i.e. -5.473) indicates a reduced probability of having administrative responsibilities along with teaching if all of the independent variables (i.e. qualification, experience and numbers of conferences organized by sample females) are zero.

Table-5.13: Variables in the Equation

	b	**S.E.**	**Wald**	**Sig.**	**Exp(b)**
Qualification (i.e. b_1)	1.749	.857	4.167	.041*	5.748
Experience(i.e. b_2)	.142	.045	9.816	.002**	1.153
Numbers of Conferences Organized (i.e. b_3)	.183	.083	4.818	.028*	1.201
Constant (i.e. b_0)	-5.473	1.205	20.612	.000	.004

Source: Survey Data

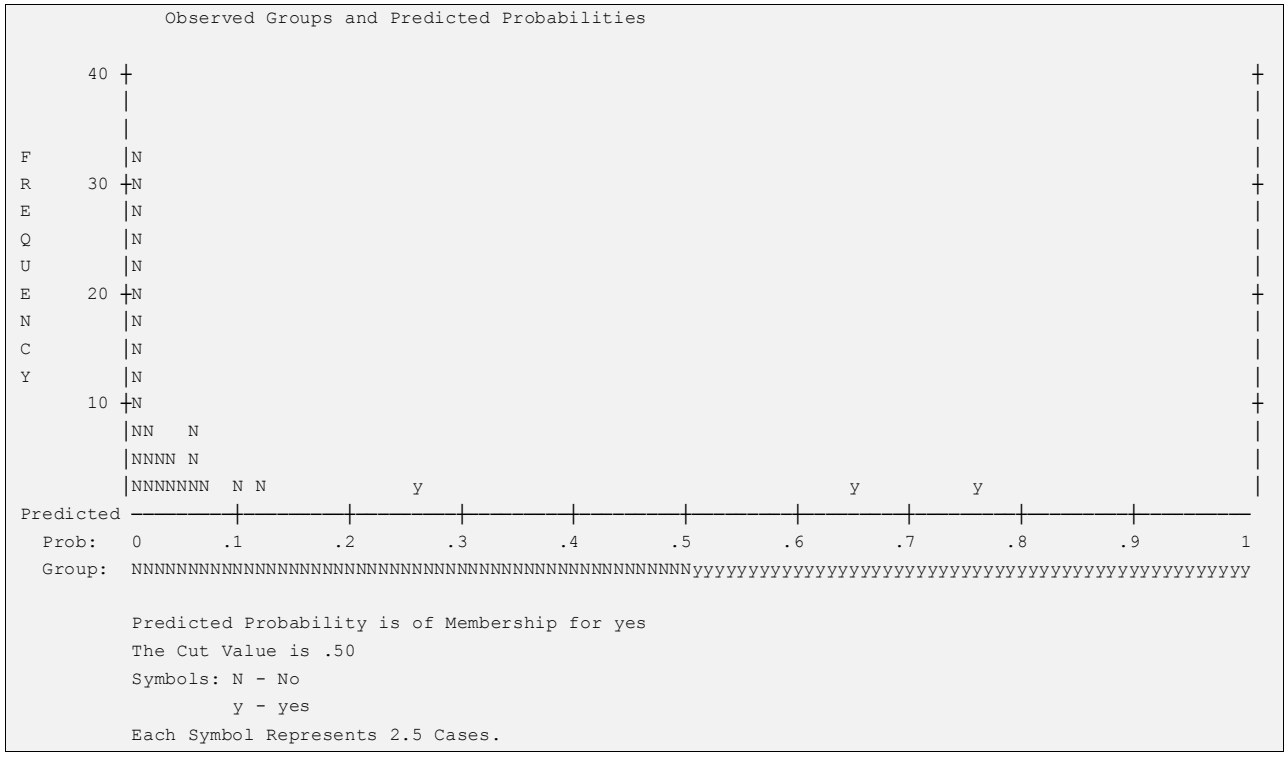
Administrative Status: 1= having administrative responsibility along with teaching"
0 = Otherwise

- *=Significant at 5% level
- **=Significant at 1% level

In presented model values of standard errors (see chapter three) for all independent variables (i.e. qualification, experience and numbers of conferences organized) are not excessively large, so there is no evidence of a numeric problem with this analysis. The values of Wald statistics (see chapter three) for experience (i.e. 9.816) highlights that compare to qualification and numbers of organized conferences, experience has more significant impact on having administrative status by sample women. Coefficient b_1, b_2 and b_3 measures each independent however interpret in values of Exp (b) (see chapter three). In this analysis value of Exp (b) for all predictors' is

greater than 1 this indicates that the odds of having administrative responsibilities along with teaching is greater per unit increase in the predictor variable (i.e. qualification, experience and numbers of conferences organized).

Figure-5.7: Observed Groups and Predicted Probabilities



Source: Survey Data

Figure 5.7 shows graphical presentation of full model predicts membership. The X axis is the predicted probability from 0.0 to 1.0 of the dependent. The Y axis is frequency: the number of cases classified. Inside the plot are columns of observed 1's and 0's, which it here codes as Y's (for having administrative status along with teaching) and N's (for Otherwise), with 2.5 cases per symbol. The cases in one group cluster on the left and the other group clusters on the right indicate that the predictive accuracy of the model is high.

It is summarized that decision making is a function of management which exists at all levels of management in Higher Education Institutions (HEIs). Rational decision making process contains various steps and these steps demand various decision making skills. Goals of Higher Education Institutions related with human resource development and demands qualified and skilled decision makers. Review literature shows that women have skilled and abilities to work at key decision making positions in Higher Education Institutions (HEIs). Throughout history women had significant contribution in the field of politics, state governance and truly involved as business leader into various sectors of economy. However, women unequally participated at leadership and decision making positions in all developed and under developed countries of the world and in different sectors of economy including Higher Education Institutions (see chapter Two). Therefore, chapter analyzes sample women representation at top and middle levels and examines various decision making skills and abilities of sample women.

Study results higlight that sample women poorly participated at top and middle levels (i.e. 16 percent) in sample universities in Sindh. On account of decision making skills and abilities, study results shows that sample women have goal setting abilities, analytical skills and have potential to efficiently perform management responsibilities. Empirical analysis confirmed that qualifications, experience and self-motivation to perform multiple responsibilities have significant impact on women representation at management cadre but sample women were short of these qualities therefore, underrepresented at middle and top management levels in universities in Sindh.

The overall comparative analysis indicate that women academic and management staff within all sample universities in Sindh has potential to perform management responsibilities because not prominent differences were found among sample women of different sample universities regarding their goal setting abilities and analytical skills. The more Ph.Ds and matured by age women reported from University of Sindh, Jamshoro in contrast less PhDs, less experienced and

less matured by age women reported from Mehran University of Engineering and Technology (MUET). Therefore, women representation at academic and management cadre within University of Sindh, Jamshoro is comparatively better whereas, poorest is found in Mehran University of Engineering and Technology (MUET).

5.13 Conclusions

Chapter found that women participation at top and middle management levels in Higher Education Institutions (HEIs) depends on their decision making skills and abilities and their self motivation to devote their time and efforts for management activities in Higher Education Institutions (HEIs). Empirical analysis confirmed that qualifications, experience and self-motivation to perform multiple responsibilities have significant impact on women representation at management cadre but sample women were short of these qualities therefore, underrepresented at middle and top management levels in universities in Sindh. Top and middle management positions also demands higher qualification and long hours but due to domestic responsibilities 43 percent sample women could not agree to devote longer hours at job and for qualification up gradation. This also is the cause of women's poor participation at senior academic and decision making positions in universities in Sindh, Pakistan.

Chapter Six

Women Personality Traits

6.1 Introduction

Chapter one give details about women education in Pakistan, chapter two presents women representation in Higher Education Institutions (HEIs) in Pakistan and in other parts of the world, chapter three explains methodological aspects of this research study. Chapter four identifies academic barriers whereas; chapter five identifies socio-cultural norms and analyzes women's decision making skills and abilities. Review literature shows that human personality dimensions or personality traits have great influence on people's relationships, goals achievements, and professional success both positively and negatively. Big Five was established as a significant and fundamental personality testing model to analyze individuals' personalities by simplifying the vast collected data about the effective behaviors of peoples. In present study researcher used the Big Five Factor Model as an attempt to describe women's personalities who are working at academic and management cadre in Public Higher Education Institutions (PHEIs) in Sindh province of Pakistan. Chapter also explores the specific role that personality traits might play in women professional career advancement.

6.2 Personality Traits or Big Five Evaluation

The word personality has been described by various personality analysts (i.e. Luthans, 1992, Eysenck 1991, Digman, 1990, Barrett and Pietromonaco, 1997, Bovee et al., 1993 and so on) within many dimensions. In broad sense personality is the combination of response patterns[34] of an individual such as attitudinal, emotional and behavioral.

[34]Response patterns refer to behaving or reacting in regularly in a particular way.

"Personality may also refer to the patterns of thoughts, feelings and behaviors consistently exhibited by an individual over time that strongly influence our expectations, self-perceptions, values and attitudes, and predicts our reactions to people, problems and stress" (Personality psychology From Wikipedia, The Free Encyclopedia). The word "Trait" refers to the individual personal characteristics (Bovee et al., 1993). Therefore it is stated that those personal characteristics which describe human behavior, feelings and thoughts is known as personality traits. The subject psychology is prominently connected with human behaviors therefore, the broad and varied history of personality has been found in psychology with an abundance of theories and research focus to evaluate the basic dimensions of personality. The empirical analysis of nature of personality was originated with the Lexical Hypothesis that is ***"the most important personality traits are encoded as single terms in natural language" (Ashton & Lee, 2001, p328).*** This hypothesis was used as one of the most important and widely-used guiding personality theories in psychology (Digman, 1990, Goldberg, 1981 and Goldberg 1993). According to Lexical Hypothesis personality characteristics that are most vital in people's lives will finally become a part of their language furthermore, the more important personality characteristics converted into a single word such as emotional, depress, active, creative etc known personal characteristics or personality traits and it is possible to develop a comprehensive classification of human personality traits. In the late-19th and early 20th century the Lexical Hypothesis began to develop quickly, successful or common in the field of Psychology particularly by English and German psychologists (Matthews et al., 2003).

In 1936 Gordon Allport[35], apply lexical hypothesis into practice and find out personality describing words in English language and extracted approximately 18000 personality describing words with the help of two most comprehensive dictionaries of the English language (Carlson & Buskist, 1997).

[35]Gordon Willard Allport was an American psychologist. Allport was one of the first psychologists to focus on the study of the personality, and is often referred to as one of the founding figures of personality psychology.

By eliminating temporary states characteristics (i.e. admirable, flustered etc), Allport reduce his extremely large list of personality describing words up to over 4000 adjectives which they believed that these were stable personality characteristics. Eventually, Gordon Allport's research stimulated other researcher to investigate personality in terms of dispositions or traits (Carlson & Buskist, 1997). Raymond Cattell further investigate the Allport-Odbert list of personality describing words and eliminated synonymous terms and added some more terms obtained from psychological research finally he introduce relatively small numbers of personality describing words. Raymond Cattell collects the data about people's behaviors in a particular situation and identified major clusters of personality traits. After making a list of traits, Cattell and his associates constructed personality tests for these traits. They used computer technology and statistical methods for data analysis. This resulted in deduction of personality traits and then becomes sixteen major personality factors such as kindness, friendliness, honesty etc. on the basis of this sixteen personality factors, Cattlle develop preliminary version of questionnaire known as 16PF (i.e. sixteen personality factors) (Matthews et al., 2003). Hans Eysenckn[36] devises his personality theory and identifies three important factors (i.e. extraversion, neuroticism and psychoticism) of human personality as bipolar dimensions[37] (Eysenck & Eysenck, 1985). According to Eysenck extraversion refer to the highly active and outgoing persons, neuroticism refer to a nature of anxiety, guilt and worried while psychoticism refer to egocentric, aggressive and antisocial nature (it should not be associated with mental illness). Eysenck consider these three personality traits (i.e. extraversion, neuroticism and psychoticism) as the most vital aspects of a person's temperament. Eysenck three factor approaches were highly accepted and supported by various personality traits researchers and theorists (Carlson & Buskist, 1997).

[36]Hans Jurgen Eysenck was a psychologist born in Germany, who spent his professional career in Great Britain. He is best remembered for his work on intelligence and personality, though he worked in a wide range of areas.

[37]Bipolar dimensions: refers to the psychological dimensions of human personality.

Later on, five personality traits were discovered (i.e. extraversion, agreeableness, conscientiousness, neuroticism and openness) which make up the essence of a person's personality (Ashton & Lee, 2001). These five personality factors, from time to time validate by various psychologist. Lewis Goldberg from his own independent research once again found the five factors (Goldberg, 1981). Later on he gives the term Big Five as a label for the factors. ***"McCrae & Costa and Bush in 1986 attempted to validate the five factor model by performing a factor analysis on a list of adjectives contains in test called the California Q-set" (Carlson & Buskist, 1997, p.452).*** Various researchers independently work and identified set of five factors for personality analysis, has somewhat different names and definitions. However, all were highly inter-correlated and factor-analytically aligned (Ashton & Lee, 2001)**.** Goldberg advanced initial five factor model at the highest level of organization (Goldberg, 1993). Since 1980s the Big-Five framework gets considerable support from researchers and become the most widely used and extensively researched model of personality (Matthews et al., 2003).

6.3 Significance of Big Five-Factor Model

Human personality dimensions or personality traits have great influence on people's relations, goals accomplishments, and professional success (Bovee et al., 1993). Big Five was established as a significant and fundamental personality testing model to analyze individuals' personalities by simplifying the vast collected data about the effective behaviors of peoples (Caligiuri, 2000). According to Matthews et al., (2003) Big-Five Factor Model is the most widely used and extensively researched model of personality. The Big Five model is a comprehensive, empirical, data-driven research tool used to identifying the traits and structure of human personality (Carlson & Buskist, 1997). The Big Five model represents the basic structure behind all personality and provides a rich conceptual framework for integrating all the research findings and theory in personality psychology (Matthews et al., 2003). Turner (2007) said that the Big

Five framework particularly useful for predict leadership success as a gross measure because it presents broad taxonomy[38] of personality dimensions. Big-Five Factor Model was discovered through a statistical procedure of factor analysis which was used to analyze how ratings of various personality traits are correlated among persons. This is a descriptive model because it refer either to a descriptive framework of observation or to a theoretical explanation of causes and consequences (Digman, 1990, Goldberg, 1981 & 1993). The Five-Factor Model has been more commonly associated with using of personality questionnaires in which for each of the items in the personality scales, respondents were asked to rate themselves on a likert scale[39] therefore; researcher will be able to identify the degree of strength of a personality character of a respondent. In present study researcher used the Big Five Factor Model as an attempt to describe a broad overview of women personalities who are working at academic and management cadre in Public Higher Education Institutions (PHEIs) in Sindh province of Pakistan. Chapter also explores the specific role that personality traits might play in women professional career advancement with the help of Big-Five Factor Model.

6.4 Women Personality Analysis with Big Five-Factor Model

The various psychologists/researchers (this includes Goldberg 1990&1993, Eysenck & Eysenck, 1985, Digman, 1990, Barrett and Pietromonaco 1997, Caligiuri, 2000, Matthews et al., 2003 etc) describe two different dimensions of each personality trait. The dimensions of sample women's personalities were analyzed under Big Five Factor Model and presented as following.

[38]Taxonomy is scientific process of classifying things or arranging them into groups.

[39]Likert Scale invented by Rensis Likert In 1932, he was an American educator and organizational psychologist best known for his research on management styles. Likert scale are often known as summative scale, which is the most commonly used scale in survey research, for ordinal primary data collection through questionnaire technique, likert statements in questionnaire known as likert items, which used to evaluate the level of agreement or disagreement of respondent to a statement. There are different point scale are used to evaluate the respondent, but five response levels are more commonly used (Likert Scale, from Wikipedia Free Encyclopedia).

- Extraversion versus Introversion
- Agreeableness versus Antagonism
- Conscientiousness versus Lack of Direction
- Neuroticism versus Emotional Stability
- Openness versus Closeness to Experience

6.4.1 Extraversion

Extraversion is the fundamental trait of human personality, it is the act or state of being predominantly concerned with and obtaining gratification from what is outside the self (Caligiuri, 2000). The broad dimensional trait extraversion is refer to the tendency to enjoy being with people and often perceived as full of energy and people having this trait is highly associated with engagement with the external world (Eysenck 1991). Extraversion personality trait has two different dimensions that is extraverts and introverts (Digman, 1990 and Matthews et al., 2003). Extraverts peoples characterized by positive emotions, they tend to be enthusiastic, action-oriented individuals who avail the opportunities for excitement (Digman, 1990). They take pleasure in activities that involve large social gatherings this includes parties, community activities and business/political groups (Goldberg 1990). Extroverts become energized when people are around them in contrast, getting bored if they are alone. In groups they like to talk, assert themselves, and draw attention to themselves, their way of behaving often remain relaxed, this gives impression to others that they are very confident in themselves and have a great self-image which may not necessarily the case (Barrett and Pietromonaco, 1997). Extraverts are understandable and accessible; they act first and think later (Bono & Judge, 2004). Caligiuri (2000) found that, relative to introvert personality the extrovert person was evaluated better in

interactions with colleagues and in terms of work performance. The reasons are that extrovert having more willing to speak actively with their local subordinates and boss than do introvert expatriates. According to Bono & Judge (2004) extraverts are positive, ambitious and influential; they are likely to generate confidence and enthusiasm among followers. At work place extroverts like working with others peoples and seek variety, action and achievement and having an optimistic view of the future (Higgins et al., 2007). Therefore, it is stated that extrovert's personalities show visible leadership qualities in Higher Education Institutions (HEIs) management extrovert's personalities can play effective role.

In contrast, introversion is referring to the tendency to being predominantly concerned with and interested in person's own mental life (Eysenck 1991). Introverts personalities less involved in the social world, they tend to seem quiet, low-key and deliberate (Barrett and Pietromonaco, 1997). According to Digman (1990) their lack of social involvement should not be conceder as shyness or depression in other words introverts personalities simply need less stimulation than extraverts and prefer to spend more time alone infect, they feel uncomfortable if they spend too much time focusing on other people. Introverts are less outgoing and less sociable but they may be very active and energetic however, regarding concepts and ideas their energy comes from their inside (Eysenck 1991). Introverts personalities have smaller group of friends and they enjoy interacting with close friends, often introverts feel pleasure in solitary activities such as watching television, reading, writing and using computers (Caligiuri, 2000). Introverts personalities are more passive therefore; just want to understand the world rather than trying to change (Barrett and Pietromonaco, 1997). Introverts think deeply about the matters and things but their attitude is reserved and they posses impenetrable personality, they are supposed to be less spontaneous in social situations therefore; first they think and observed the situations before acting in social situation (Mount and Barrick, 1995). Often introverts prefer to concentrate on a single activity at a time therefore they feel uncomfortable to do multiple works at a time and prefer to do work

that has depth; they like to do work alone and seek quiet for concentration (Huang et al., 2005). In the light of review litterateur regarding introverts personalities, it is stated that extrovert's personalities short of leadership qualities.

In terms of gender, women are supposed to be a reserved personality, less socialized and careful in communication (i.e. their personal characteristics) which effects on their personal and professional life. Luthans (1992) argued that networking and socializing had a significant relationship with professional success but women by nature is less communicative, less socialized and more reserved with their job fellows which in turned limited their networks at workplace. According to Shah (1999) women by nature found as reserved personality that is an obstacle which keep women as undermine factor in human resource management. In this research study parameter extraversion personality trait was selected (see chapter three, table 3.1 quantifiable parameters) to analyze sample women on extraversion personality trait.

Table 6.1 highlights that 44.7 percent (i.e. strongly agree and agree combined) sample women working at academic and management in sample universities were reserved persons, they tend to seem quiet, low-key and deliberate. In addition, 27.3 percent (i.e. disagree and strongly disagree combined) sample women were less involved in the social activities. These working women were not shy or depress infect, they were very active and energetic but simply not socially, they needs less stimulation and more time alone, this indicative of introverts personality under Big Five Factors. These women lack of communication initiatives which are the required quality for effective leadership. Furthermore, data revels that 51 percent (i.e. disagree and strongly disagree combined) sample women reported that they were not reserved persons, in groups these women like to talk, assert themselves, and draw attention to them.

Table 6.1: Women on Extraversion Personality Trait n = 98 (%)

Statements	Liaquat University of Medical & Health Sciences (LUMHS)					Mehran University of Engineering & Technology (MUET)					University of Sindh, Jamshoro (UOS)					All Sample Universities					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	Total
I see myself as someone who is reserved	6	34	_	42	18	31.8	13.6	9.1	22.7	22.7	18.2	36.4	9.1	27.2	9.1	14.9	29.8	4.3	34	17	100
I see myself as someone who is outgoing, sociable	20	40	10	24	6	40.9	27.3	13.6	18.2	_	31.8	31.8	4.5	27.4	4.5	27.6	35.1	9.6	23.4	4.3	100

Source: Survey Data, 2012

- 1=Strongly Agree
- 2=Agree
- 3=Undecided
- 4=Disagree
- 5=Strongly Disagree

In addition, 62.7 percent (i.e. strongly agree and agree combined) were engaged with the external world, they enjoy being with people, and are perceived as full of energy, they have tendency to seek out stimulation and the company of others, they were enthusiastic, action-oriented women, this indicative of extraverts personality under Big Five Factors. These women found to be major initiative taking personalities. These extrovert women were capable and have guts to take leadership positions. There was someone (i.e. undecided) who was not able to analyze their personality on account of extraversion personality trait.

6.4.2 Agreeableness

Agreeableness is considered an interpersonal characteristic that is commonly found in people who are accommodating, helpful, patient, peaceful, pleasant, undemanding, considerate, generous, flexible, modest, honest, affectionate, down-to-earth, and easy-going[40] (Goldberg, 1993). Agreeableness is a tendency to be compassionate and cooperative rather than suspicious and antagonistic with others human beings, they are generally considered as friendly, generous and willing to compromise their interests with others (Barrett and Pietromonaco, 1997). Agreeableness personality trait is associated with aspects of social perception and individuals who score high on account of agreeableness seem more likely than their counterparts to establish friendships with peoples because of these qualities, agreeable peoples remain more conscious to solve interpersonal problems by seeking harmonious relationships with others individuals (Mount and Barrick, 1995). Although an agreeableness manager create friendly environment at work place however, a highly agreeable decision maker may find himself or herself having difficulty in making harsh decisions such as reprimanding a subordinate because high agreeable manager or decision maker will be very likely perceived as a friend to them (Higgins et al., 2007). On the contrary, subordinates are more willing to accept orders from agreeable boos (Digman, 1990). ***Bono & Judge argued that "The modesty and kindness of agreeable individuals is not the hallmark of charismatic leaders. Nonetheless, they may score high in idealized influence and be seen as role models because of their trustworthiness and consideration for others" (Bono & Judge, 2004, p.903).***

Disagreeable individuals are generally unconcerned with others' well-being and a low score on agreeableness may have something in common with the ability to manipulate others in one's own interest (Caligiuri, 2000).

[40]Easy-going: A person who relaxed and happy to accept things without worrying or getting angry.

Matthews et al., (2003) describes that disagreeable or antagonistic personalities are generally argumentative, overly critical, demanding, rude and disrespectful, cruel, irritable, vain, stubborn, suspicious, selfish, insensitive, and prejudiced. Huang et al., (2005) argued that antagonistic types of people seem to find faults with their fellow human beings and that in extreme cases, disagreeable individuals resembles to the sociopath personalities[41]. In this connection of presented review literature regarding agreeable personality trait it is sated that management in Higher Education Institutions (HEIs) heavily related with human resource management and individuals having agreeable personalities are more suitable in higher education management.

According to Kepuladze (2010) women physically and biologically suppose to be sensitive and soft in their behaviors, attitudes, thinking and feelings that affect their priories at work. According to Fullan (1993) women are polite and kind and give more importance on inter-personal relationships at the workplace and respectful treatment by the employer. Thus, it is clear that women place more value on so-called 'soft issues' during their job performance. Eagly & Carli, (2003) argued that working at management positions women is more cooperative with their subordinates and other colleagues. According to Federal Ministry of Family Affairs, (2010) women managers seem to be very successful in order to motivate, to courage and to persuade their subordinates. Shah (1999) found that women are more suitable for effective leadership in educational management because women have participated, interactive, demonstrates and seeking cooperation behavior that are the required qualities for effective manager in human resource management. Therefore it is stated that by nature women is seems to more agreeable and more suitable in higher education management. In this research study parameter agreeable personality trait was selected (see chapter three, table 3.1 quantifiable parameters) to analyze sample women on agreeable personality trait.

[41]Sociopath personalities refer to individuals who behave in an aggressive way towards other peoples.

In table 6.2 survey data revels that 44.7 percent (i.e. agree) sample women academic and management staff were generally trusting persons. These sample women are compassionate, cooperative, kind, friendly and helpful with other colleagues. They were willing to compromise their interests with others. 41.5 percent (i.e. disagrees) sample women have an optimistic view of human nature, this indicative that sample women were generally trusting individuals.

Table-6.2: Women on Agreeableness Personality Trait n = 98 (%)

Statements	Liaquat University of Medical & Health Sciences (LUMHS)					Mehran University of Engineering & Technology (MUET)					University of Sindh, Jamshoro (UOS)					All Sample Universities					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	Total
I see myself as someone who is generally trusting	52	38	_	8	2	50	36.4	_	4.5	9.1	27.3	68.2	_	4.5	_	45.7	44.7	_	6.4	3.2	100
I see myself as someone who tends to find fault with others.	4	18	8	42	28	_	9.1	27.3	40.9	22.7	4.5	9.2	4.5	40.9	40.9	3.2	13.8	11.7	41.5	29.8	100

Source: Survey Data, 2012

- 1=Strongly Agree
- 2=Agree
- 3=Undecided
- 4=Disagree
- 5=Strongly Disagree

6.4 percent women (i.e. agree) were uncooperative, unconcerned with others' well-being, and are less likely to extend themselves for other people. 13.8 percent sample women (i.e. disagrees) had

pessimistic view of human nature. This indicates less agreeable sample women under Big Five personality traits. 38 percent sample women (i.e. average of 46 percent strongly agree and 30 percent strongly disagree) were highly trusting and sympathetic persons. However, in human resource management, extreme agreeable nature may not suitable for key management positions which required take harsh decisions.

6.4.3 Conscientiousness

Conscientiousness is the tendency to be organized, careful, and disciplined (Eysenck & Eysenck, 1985). Conscientiousness personalities identified as thoughtful peoples with good impulse control and strong desire to achieve success, these personalities act dutifully and deliberately (Digman, 1990). According to Goldberg (1990) conscientiousness denotes a person who is hardworking, ambitious, energetic, persevering, organized, dependable, efficient, punctual, and decisive. A person with high conscientiousness consistently works hard in job assignments, willing to take responsibility of work and conducts tasks carefully, organized and in well-planned manner. According to Huang et al., (2005) conscientiousness is positively associated with work performance across all categories of jobs. Conscientiousness is importantly related to the managers' professional success because these peoples follow rules and schedules and plan everything in advance rather than spontaneously act therefore, these peoples consider as more reliable at work (Higgins et al., 2007). Conscientiousness trait also been identified that how an individual respects social and professional roles and demonstrates trustworthiness to words other individuals (Mount and Barrick, 1995). This indicates that a conscientious person strongly willing to better justify there all professional and non-professional roles in the society. In this connection it is stated that in Higher Education Institutions (HEIs) conscientiousness is necessary quality as to perform management responsibilities and lack of this trait will be the cause of tremendous trouble and undo success in professional career. On other side, extreme

conscientious persons may become workaholics, perfectionists, and compulsive in their work performance (Matthews et al., 2003). According to Huang et al., (2005) the completion of a task depends on required cooperation of other peoples and favorable circumstances however, conscientious individual often be frustrated by unexpected circumstances in the new environment which may inhibit their plans. In contrast, those who score lowest at conscientiousness trait identified as disorganized, careless, unreliable, inconsistent, forgetful, reckless, not ambitious and acting suddenly without thinking carefully about what might happen (Goldberg, 1990). Personalities who get low scores on account of conscientiousness trait are not necessarily consider as lazy and dishonest to their work performance and other responsibilities but they tend to be less goal-oriented and less motivated in the direction of success (Caligiuri, 2000). In this connection it is acknowledged that personalities who get low scores on account of conscientiousness trait may unable to drive themselves to achieve or accomplish a task therefore; may not be more suitable for management activities.

Shah (1999) analyzed the women in relation to their job performance and found that women are organized, disciplined hardworking and paying extra careful attention to every detail work. Federal Ministry of Family Affairs (2010) argued that working at management positions women have strong sense of dedication, loyalty and commitment to their organizations. Therefore it is stated that women are conscientious gender which is the required characteristic for professional success. In this research study parameter conscientiousness personality trait was selected (see chapter three, table 3.1 quantifiable parameters) to analyze sample women on conscientiousness personality trait. In table 6.3 reveals that approximately 82 percent sample women (i.e. disagree and strongly disagree combined) were very active and energetic. In addition, 87.2 percent sample women (i.e. agree and strongly agree combined) were perform their duties carefully and correctly. Working at academic and management cadre in sample universities these sample

women prefer to purposeful planning rather than spontaneous behavior and highly motivated in the direction of success.

Table-6.3: Women on Contentiousness Personality Trait n= 98 (%)

Statements	Liaquat University of Medical & Health Sciences (LUMHS)					Mehran University of Engineering & Technology (MUET)					University of Sindh, Jamshoro (UOS)					All Sample Universities					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	Total
I see myself as someone who tends to be lazy	_	12	_	38	50	4.5	27.3	4.5	31.8	31.8	_	13.6		50	36.4	1.1	16	1.1	39.3	42.5	100
I see myself as someone who does a thorough job	44	40	6	10	_	54.5	31.6	9.1	4.5	_	40.9	54.6	4.5	_	_	45.7	41.5	6.4	6.4	_	100

Source: Survey Data, 2012

- 1=Strongly Agree
- 2=Agree
- 3=Undecided
- 4=Disagree
- 5=Strongly Disagree

These respondents were positively regarded by their colleagues as intelligent and trustworthy on job. Out of total conscientious sample women, approximately 44 percent (i.e. average of strongly agree and strongly disagree) reported with high degree of conscientiousness, these women were perform their work highly dutifully and consider as prompt during their job performance in sample universities in Sindh. There was someone (i.e. undecided) who was not able to analyze their personality on account of conscientiousness personality trait.

6.4.4 Neuroticisms

Neuroticisms trait is the other central dimension of human personality associated with the tendency to experience negative feelings such as anger, anxiety or depression and the peoples having prominent negative feelings or emotions known as neurotic persons (Goldberg, 1990). Mount and Barrick (1995) stated that neuroticism is associated with lessened emotional control and neurotic individuals are challenged by fear, jealousy, naivety and intrusive thoughts. According to Matthews et al., (2003) and Huang et al., (2005) individuals who scores high in neuroticism have a tendency to be worriers, insecure, self-conscious and temperamental. Impulsive behaviors (this includes overeating, smoking and drinking excessively) also identified as a component of neuroticism (McCrae & Costa, 1980). Due to above describe aspects of neuroticism it is sated that in unfavorable or stressful situation neurotic individuals posses poor ability to coping out indeed and high neurotic individuals lose their temperament and control over emotions when they facing problems. In terms of the general living and at work place a neurotic person may easily lose his or her temper in daily activities moreover, working at management or decision making positions a highly neurotic manager often shows a bad temper with their subordinates (Huang et al., 2005). Inappropriate attitudes of neurotic mangers with their subordinates create unfriendly and unhealthy work environment and decrease manager's or decision maker's self esteem by their subordinates consequently, motivation of subordinates to accept their boss instructions respectfully and happily will decrease. Bono & Judge (2004) argued that self-confidence is requisite quality for working as leader or key decision maker but neurotic individual lack by self-confidence. In addition neurotic individual feel difficulty to communicate with others both at work place and in building friendships (Huang et al., 2005). Thus it is identified that individuals high in neuroticism are not suitable for leadership and important management responsibilities particularly in human resource management. Furthermore, they cannot present themselves as role models (this includes idealized influence,

inspirational motivation or intellectual stimulation for others). At the other end of the scale, individuals who score low in neuroticism are less easily get upset and are less emotionally reactive and confident (Mount and Barrick, 1995). According to Goldberg (1990) confident individuals consider as even tempered, relaxed and capable to controlling their emotions. Individuals who score low in neuroticism tend to have self-esteem[42] and general self-efficacy (Huang et al., 2005). Thoresen, et al., (2004) reported that emotional stability has a positive effect on job performance and found this relationship to be valid across occupations. Therefore it is stated that low in neuroticism will be able perform better in human resource management rather that neurotic person.

Emotional stability is required to confidently perform administrative responsibilities (Luthans, 1992, Bovee et al., 1993). Birch & Kamali (2001) in their research study found that women tend to be more emotional and overly sensitive to others' reactions at the same time; they use their heart when making decisions. Therefore women at work place highly effected by working environment which directly and indirectly effective their job performance in negative manner. Shah (1999) found that women tend to slightly higher sensitive and apprehension than men; they have a tendency to be guilt-prone on other side, working at decision making position more sensitive women feels worried and anxious about decisions once it has been made. In unfavorable circumstances sensitive and emotional women feel more stress at work place, which results negatively affect their decision making abilities and relationships with colleagues during job performance (Birch & Kamali, 2001). In this research study parameter neuroticisms personality trait was selected (see chapter three, table 3.1 quantifiable parameters) to analyze sample women on neuroticisms personality trait.

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[42]Self-esteem is a feeling of being happy with individual's own character and abilities.

Table 6.4 examines the sample women's ability to experience negative emotions such as anxiety or depression. Data explore that 15.9 percent respondents (i.e. disagree and strongly disagree combined) had low tolerance for stress. These sample women were emotionally reactive and vulnerable to stress. They were more likely to interpret ordinary situations as threatening and minor frustrations as hopelessly difficulty. In addition, 27.7 percent sample women (i.e. strongly agree and agree combined) fail to respond on accounts of strong nerves and confidence. These both negative emotions diminish their neurotic's ability as to think clearly, make decisions, and cope effectively with stress.

Table-6.4: Women on Neuroticism Personality Trait n = 98 (%)

Statements	Liaquat University of Medical & Health Sciences (LUMHS)					Mehran University of Engineering & Technology (MUET)					University of Sindh, Jamshoro (UOS)					All Sample Universities					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	Total
I see myself as someone who is relaxed, handles stress well	24	52	12	8	4	22.7	50	13.6	9.1	4.5	13.6	54.5	4.5	18.2	9.2	21.3	52.2	10.6	10.6	5.3	100
I see myself as someone who gets nervous easily	16	14	4	48	18	_	13.6	18.2	36.4	31.8	13.6	22.8	4.5	45.5	13.6	11.7	16	7.4	44.7	20.2	100

Source: Survey Data, 2012

1=Strongly Agree
2=Agree
3=Undecided
4=Disagree
5=Strongly Disagree

Furthermore, 73.4 percent women (i.e. strongly agree and agree combined) were reported as calm and emotionally stable persons, 64.9 percent respondents (i.e. disagree and strongly disagree combined) were less easily get upset and confident. All these negative and positive qualities are associated with neuroticism under Big Five category. Fewer respondents were not able analyze themselves on neuroticism under Big Five category.

6.4.5 Openness

Openness is another important dimension of human personality under big five factor model (Goldberg, 1990). Openness is refers to the ability to think, appreciate and accept the new environment and individuals who scoring high on openness personality trait posses a broad range of interests, love adventures and trying new things to do (Huang et al., 2005). Matthews et al., (2003) stated that openness can be observed through people's fantasies, aesthetic interests, feelings, actions, ideas, and values. Open to experience individuals consider as intellectual, insightful, intelligent, inventive, inquisitive, and sophisticated. Individuals who open to experience also defined as open-minded, curious and original (Mount and Barrick, 1995). Individuals who score high in openness to experience posses the ability to see a vision for the organization's future due to their imaginative and insightful power, this may indicate leadership behaviors (Bono & Judge, 2004). According to Thoresen et al., (2004) openness to experience should be positively associated with human resource management because in a field of human resource management open peoples welcome their colleagues' and subordinates' ideas for the solution of day to day problems as for the betterment of the organization, this create positive work environment. In the light of above openness description, it is stated that open-minded persons have the ability to think, appreciate and accept the new environment, peoples and ideas or their attitude is liberal and flexible towards social values. Open personalities are more suitable for human resource management and enjoying teaching and learning process. Those who scores

low on account of open to experience known as close to experience or close-minded peoples or they posses closed styles of thinking (Goldberg, 1990). According to Digman (1990) close to experience individuals consider as shallow, unreflective, unimaginative, unobservant, dull, and ignorant. Closed personalities generally consider as inartistic, conventional, conservative, straightforward, ambiguous, subtle and cautious, these peoples tend to honor tradition, like to maintain routine and do not appreciate changes in their daily life (Thoresen et al., 2004). It is recognized that peoples having closed personality suppose to be more suitable for strict controlling positions (Bono & Judge, 2004).

According to Eagly& Carli (2003) and Federal Ministry of Family Affairs (2010) working at management positions women support input from others with respect for their ideas and willingness to share information with their colleagues. Shah (1999) found that women posses collaborative work style, they have ability to generating new ideas and recognizing trends. In this connection it is stated that generally, women are open to experience therefore they like to involve in teaching and possess management qualities. In this research study parameter openness personality trait was selected (see chapter three, table 3.1 quantifiable parameters) to analyze sample women on openness personality trait.

Table 6.5 analyzes sample women on openness personality trait. Data highlights that 76 percent sample women (i.e. average of 70 and 82 percent agree and strongly agree combined) reported as open individuals, these women were found to be more supervising and management quality giving personalities. 12 percent sample women (i.e. average of 18 and 6 percent disagree and strongly disagree combined) reported as closed personalities these women not qualified to take management responsibilities. There was someone who was not able to analyze them on openness personality trait.

Table-6.5: Women on Openness Personality Trait n = 98 (%)

Statements	Liaquat University of Medical & Health Sciences (LUMHS)					Mehran University of Engineering & Technology (MUET)					University of Sindh, Jamshoro (UOS)					All Sample Universities					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	Total
I see myself as someone who has few artistic interests	30	36	14	14	6	45.5	27.3	9.1	9.1	9.1	36.4	40.9	9.1	13.6	_	35.1	35.1	11.7	12.8	5.3	100
I see myself as someone who has an active imagination	36	38	14	10	2	63.6	36.4	_	_	_	50	31.8	18.2	_	_	45.7	36.2	11.7	5.3	1.1	100

Source: Survey Data, 2012

1=Strongly Agree
2=Agree
3=Undecided
4=Disagree
5=Strongly Disagree

It is summarized that the decades of research on personality has uncovered various numbers of personality describe words which in turn refer as the foundation pillar for the Big Five Factor Model of personality analysis and this model was further adopted and tested by various researchers. The Big Five framework of personality traits suppose to be a robust model for understanding the relationship between personality and their behaviors. Therefore, in this research this model used as an important tool to analyze women personalities who were working at academic and management levels in public Higher Education Institutions (HEIs) in Sindh. Chapter also explores the specific role that personality traits might play in women participation at academic and management cadre in sample universities in Sindh.

According to Big Five Factor Model extroverts and introverts are the different personalities. Extraversion is the tendency to enjoy and communicate being with people (Turner, 2007). Extroverts may perform better in human resource management unlike introverts. In the sample higher education institutions in Sindh (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) and University of Sindh, Jamshoro) both extroverts and introverts women were found. 36 percent sample women reported as introverts, these women are quiet persons, lacked communication initiatives which are the required quality for effective leadership. 57 percent sample women fall under extrovert personality trait these women found to be major initiative taking personalities. These extrovert sample women were effective and have courage to take leadership roles.

Agreeableness is a tendency to be kind, trusting and cooperative and chapter found that sample women were generally trusting individuals. 38 percent sample women were highly trusting and sympathetic persons. However, in human resource management, extreme agreeable nature may not suitable for key management positions which required taking harsh decisions. Contentiousness is the tendency to be active and dutiful; it is the important personality characteristic required getting success in professional and general life. Generally women found as conscientious gender. In the sample universities in Sindh (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) and University of Sindh, Jamshoro) women working at academic and management cadre were very active and energetic. These women perform their duties efficiently, these women have desire to achieve success and more reliable at work.

Neuroticism is the tendency to experience negative emotions such as anger, anxiety or depression. High on neuroticisms suppose to be as unconfident persons and not able to efficiently perform management activities in contrast, low on neuroticisms suppose to be are

confident persons which is one of required quality for effective leadership[43] and decision making. Review literature indicates that women are sensitive and emotional. In sample higher education institutions in Sindh (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) and University of Sindh, Jamshoro) 16 percent sample women (i.e. disagree and strongly disagree combined) had low tolerance for stress. These women were emotionally reactive and vulnerable to stress. Self-confidence is required quality in order to work as decision maker but 28 percent respondents (i.e. strongly agree and agree combined) failed to respond on accounts of strong nerves and confidence. Openness is refers to the ability to think, appreciate and accept the new environment. In the sample higher education institutions in Sindh (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) and University of Sindh, Jamshoro) 76 percent sample women reported as open individuals, these women were found to be more supervising and management quality giving personalities. In contrast, 12 percent sample women (i.e. average of 18 and 6 percent disagree and strongly disagree combined) reported as closed personalities these women not qualified to take management responsibilities.

Over all it is found that women's reserved personality and weak nerves are the negative aspects of their personalities that keep women as undermining factor at management cadre in universities in Sindh. Women scoring high in openness to experience therefore they like to get in teaching, rather than, management activities. Sample women were trustworthy and Intellectual[44] but their extremely agreeable nature is not suitable for key decision making position.

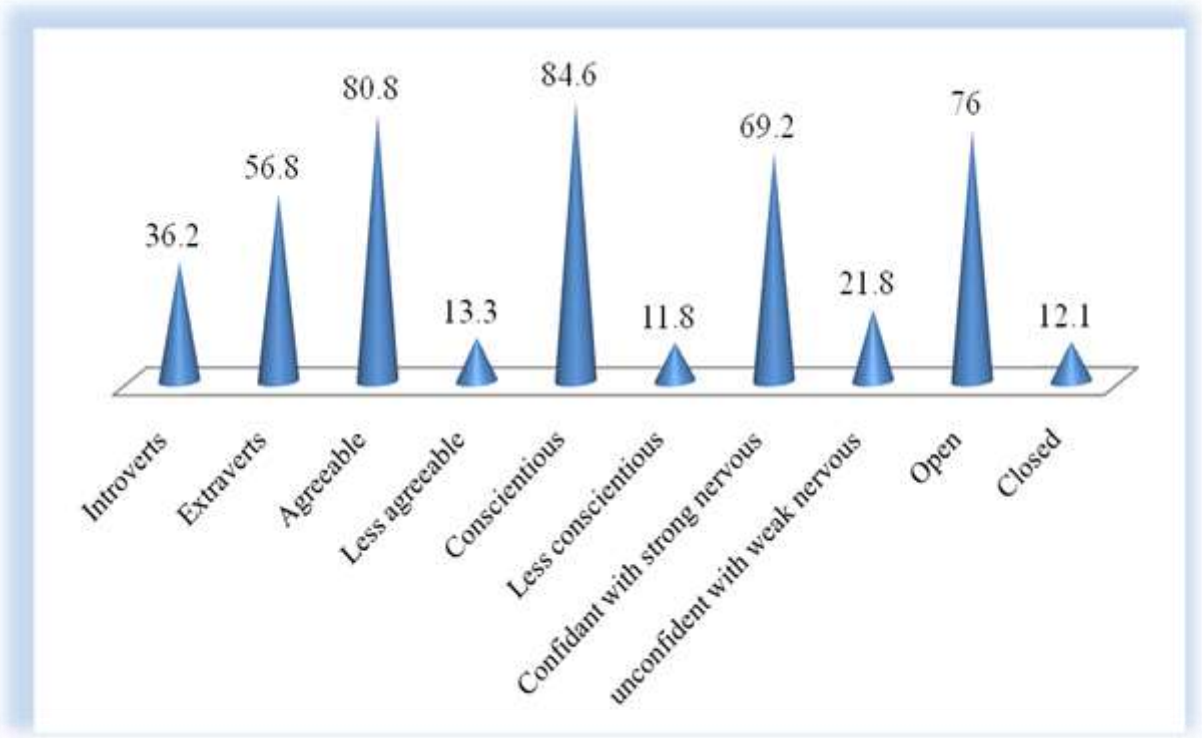
[43]Effective leadership is the process of social influence in which one person can enlist the aid and support of others in the accomplishment of a common task.

[44]Intellectual is a specific variety of the intelligent. This mental capacity associated with thinking, reasoning and problem solving. An intellectual person primarily uses intelligence in either a professional or an individual capacity.

6.5 Graphical Presentation of Personality Analysis

The graphical presentation in figure 6.1 highlights ratios of sample women according to the essence of their personalities; data shows that large proportion of sample women were extroverts, agreeable, contentious, confident and open (i.e. 56.8 percent, 80.8 percent, 84.6 percent, 69.2 percent and 76 percent respectively) this indicates that sample women have potential to efficiently perform management responsibilities.

Figure-6.1: Women's Personality Traits n = 98 (%)



Source: Survey Data, 2012

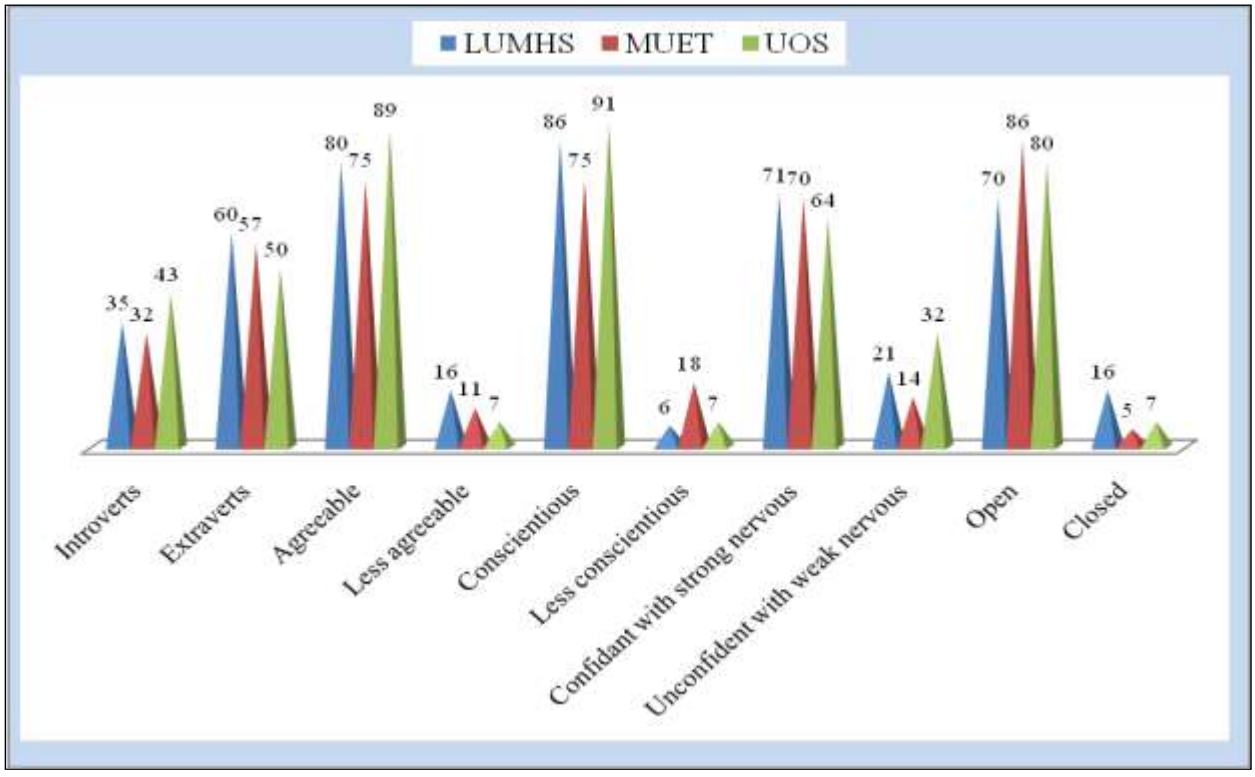
On other side there were particular proportion of sample women academic and management staff reported as reserved, extremely agreeableness, not hard working and unconfident, these sample women lack of appropriate managerial and leadership qualities and these are the negative aspects

of their personalities and keep women as undermine factor at top and middle management levels in sample universities in Sindh.

6.6 Comparisons of Sample Universities

The figure 6.2 highlights the comparative analysis of personality traits of women respondents within sample universities (i.e. Liaquat University of Medical & Health Sciences (LUMHS), Mehran University of Engineering & Technology (MUET) and University of Sindh, Jamshoro).

Figure-6.2: Comparative Analysis of Women's Personality Traits n = 98 (%)



Source: Survey Data, 2012

- LUMHS stand for Liaquat University of Medical and Health Sciences
- MUET stand for Mehran University of Engineering and Technology
- UOS stand for University of Sindh, Jamshoro

According to data comparatively high ratio of extraverts women were reported from Liaquat University of Medical and Health Sciences (LUMHS) this indicate that women becomes more expressive or feel more comfortable at work where women are in clustering in numbers. In Mehran University of Engineering and Technology (MUET) comparatively less proportion of agreeable and introverts sample women were reported at the same time, in this engineering university women respondent were emotionally stable and more open to experience new things. In contrast, sample women reported from University of Sindh, Jamshoro (UOS), were more reserved and emotionally unstable but at the same time they were more conscientious and agreeable. Review literature shows that human personalities also found to change with age maturity, agreeableness and conscientiousness increase, while extroversion, neuroticism, and openness generally decrease by age maturity[45]. Majority of young sample respondents reported from Mehran University of Engineering and Technology (MUET) whereas, majority of matured respondents by age reported from University of Sindh, Jamshoro (UOS), these women are hard workind and posses cooperative mangement style. Both these qualities also required for effective management in higher education institutons. Therefore, comparatively women representation at senior academic and management cadre in University of Sindh, Jamshoro is better than other sample universities (i.e. Liaquat University of Medical & Health Sciences (LUMHS) and Mehran University of Engineering & Technology).

[45]Age maturity is the ability to respond to the environment in an appropriate manner. This response is generally learned rather than instinctive, and is not determined by one's age. Maturity also encompasses being aware of the correct time and place to behave and knowing when to act appropriately, according to the circumstances and the culture of the society one lives in.

6.7 Empirical Analysis of Personality Impacts on Performance

The above discussion on personality indicates that personality of women have a significant impact in their career advancement. Sample women also found with different personalities that may affect their representation at senior academic and key management positions. Therefore, this chapter also presents the empirical analysis of personality impacts on various job performance indicators such as on research publications, on organized conferences and on numbers of classes taken by sample women (see chapter three table 3.1 quantifiable parameters). Table 6.6 presents the impact of introversion and openness personality trait (i.e. independent variables) on numbers of research publications in journals (i.e. dependent variable) by sample women.

Table 6.6: Empirical Analysis of Personality Impact on Numbers of Research Publications by Women n = 98

Personality Traits	Un-Standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.362	1.699		-.213	0.832
Openness (X_1)	4.292	1.738	.253	2.469	0.015*
Introversion (X_2)	3.696	1.612	.235	2.292	0.024*

Source: Survey Data, 2012

- *Significant, $p > 0.05$
- Dependent variable (Y) = numbers of research publications in journals

Significant value of t-statistic (see chapter three) shows that introversion and open personality traits have significant impact on research publications by sample women. This indicative that sample women who are less involved in social world and like to experience new thing are more

likely to publish research papers. Positive values of b coefficient (see chapter three) for openness (i.e. 4.292) and for introversion (i.e. 3.696) personality trait indicates that both variables have direct relationship with numbers of research publications by sample women.

Table 6.7 shows impacts of less-conscientiousness and conscientiousness personality dimensions on number of classes taken by sample women. Significant value of t-statistic (see chapter three) shows that both conscientiousness and less-conscientiousness personality characteristics have significant impact on numbers of classes taken by sample women whereas, negative sign for beta coefficient for less-conscientiousness personality trait (i.e. -0.583) indicates negative impact of less-conscientiousness personality trait on number of classes taken by sample women. This indicative that conscientious sample women are more involved in teaching activities whereas, less-conscientiousness women less involved in teaching activities.

Table 6.7: Empirical Analysis of Personality Impact on Number of Classes Taken by Women n = 91

Personality Trait	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.312	.253		5.181	.000
Less-Conscientiousness (X_1)	-.583	.236	-.238	-2.472	.015*
Conscientiousness (X_2)	.948	.265	.345	3.576	.001**

Source: Survey Data, 2012

- *Significant, $p > 0.05$
- **Significant, $p > 0.01$
- Dependent variable (Y) = number of classes taken by sample women

Table 6.8 presents the impact of introversion and extroversion personality traits on sample women involvement in management activities. To analyze the impact of personality on women participation in management activities, conferences organized by sample women selected as independent variable (see chapter three, table 3.1 quantifiable parameters). "1"is allocated for conference organized throughout their professional career and "0" allocated for not a single conference organized by sample women throughout their professional career. The significant value of Wald statistics (see chapter three) for extraversion personality trait (i.e. 8.497) indicates that extroverts sample women like to get in management activities. Introvert personality trait has not statistically significant impact on women involvement in conferences organizing for their institutions. The value of Exp (b) for extraversion personality trait (i.e. 4.070) indicates that those sample women who are extroverts have more motivation to be involved in management activities.

Table 6.8: Empirical Analysis of Personality Impact on Conferences Organized by Women

n = 98

Personality Trait	B	S.E.	Wald	Sig.	Exp(b)
Introversion (X_1)	.316	.455	.481	.488	1.371
Extraversion (X_2)	1.404	.482	8.497	.004*	4.070
Constant	-1.238	.469	6.966	.008*	.290

Source: Survey Data, 2012

- Dependent Variable (Y)=conferences organized by sample women
  1= conference organized throughout their professional career
  0= for not a single conference organized throughout their professional career
- *=Significant, p > 0.01

6.8 Conclusions

This chapter found that Big Five Factor Model has been a good organizing umbrella to measure many of the aspects of women personality dimensions. In this chapter Big Five Factor Model is used to analyze sample women's personalities who were working at academic and management levels in sample universities in Sindh. Chapter also explores the role that personality traits, play in women participation at academic and management cadre in sample universities in Sindh. Chapter found that on personality traits particular proportion of women were reported as introverts, these women do not have much communication initiatives. However, 57 percent sample women found as extroverts, these women have potentials to work at key decision making positions. On openness personality trait majority of women were found as qualified to take management responsibilities, while some did not qualify to supervise. Taken as a whole, sample women were found as agreeable in nature, whereas, 38 percent highly agreeable sample women are not suitable in higher education management. 28 percent sample women were also found short of required confidence. This is the negative aspect of their personalities that undermine their capacities to take the responsibilities of management at university level. Empirical analysis confirmed that personality traits has significant impact on women's involvement in academic and management activities, which in turn effect their representation at academic and management cadre in Higher Education Institutions (HEIs).

Chapter Seven

Conclusions & Recommendations

6.1 Conclusions & Recommendations

- Education plays a significant role to upgrade women's status in society and their qualitative contributions in economic development of a nation. In Pakistan women's population comprises of 48 percent of the total population of Pakistan and contributes a lot to economic development of the nation (Economic Survey of Pakistan, 2010-2011). However, in Pakistan female seldom have equitable access to obtain education; consequently, 55 percent of female population remains illiterate and only 3 percent of 18 to 23 years old females, have access to higher education level and this trend is more prominent in rural regions of the country.

- At policy level Government of Pakistan took many initiatives to uplift the status of women education. Hence, women improved their relative education status but due to many qualitative and quantitative hurdles women education status still remains undermined. Thus resulting, women's access to work at better employment positions in both public and private sectors have been infrequent and inequitable. The same trend is observed in Sindh Province of Pakistan.

- Universities can play an integral role to create opportunities for education and equitable employment. Higher education sector is itself facing unequal female representation at academic and management cadre all the world over (European Commission, 2009).

- The objective of this research study is to find out male-female participation in public higher education sector in the shape of their involvement in teaching, management and research. It also addressed and assessed all major issues concerned to underutilization of educated

women in Higher Education Institutions in Sindh, Pakistan. It is assumed, that women are not fully equipped with the qualities and abilities to manage crisis situation, therefore, women cannot shoulder the power of decision making. This study is focused to evaluate women representation in managing the challenging conditions that required immediate decision making, along with competencies to take decisions for the betterment of their related institutions. The study also analyzes women's research capacities, reviews their self-motivational force and the impact of their personality characteristics on managing universities.

- It is stated that such research studies have never been confined out, particularly, in the perspective of Higher Education Institutions (HEIs) in Sindh or elsewhere in Pakistan.

- The study intends to present trends (i.e. motivation, personality traits, education status etc.) through quantification of data using formal statistical approaches along with informal methods of data collection. The findings are relevant in understanding the culture of Higher Education Institutions (HEIs) and place of women in those institutions. This is important for future policy planning at public institutions.

- In this survey research, through purposive sampling technique, one general and two leading professional public universities in Sindh (i.e. 22 percent of population) were purposely selected as representative sample of population for the data collection. In order to achieve multiple research objectives in systematic way, respondents were categorized into three different categories (i.e. teaching, management and research). Primary data was collected through Interview in formal questionnaire and secondary was data collected through all secondary Sources. MS Excel and Statistical Package for Social Sciences (SPSS) were used to analyze the data. To identify the factors that determine the women's academic participation at university level multiple regression models were used.

- Study results show that over past the decades academic representation has been improved, but gender gap (i.e. 30:70) that favors males, still persists in universities of Pakistan. In addition, women faculty representation is on the decline from junior to senior academic positions in universities in Sindh. These trends are more prominent in male dominating professional higher education institutions, such as engineering universities.

- Women's participation at management cadre at Higher Education Institution (HEIs) in Pakistan is unequal even in sample universities in Sindh. Women's representation at management cadre is very low (i.e. only 9 percent), particularly, at top and non-teaching management positions.

- 82 percent sample women attended workshops. These women have motivation to develop their professional skills and intellectual potential. While majority of women did not actively participate in research related activities (this includes research supervisor, research publications in journals, attending conferences, paper presented in seminars both at national and international level), remained stuck at junior teaching positions (i.e. lecture and assistant professor).

- Majority of women, due to domestic responsibilities, remain less mobile, particularly at international level, therefore, do not participate in research activities and in professionals skills development programs, organized by International forums/universities (such as only 7 percent having Ph.D/ foreign degree and only 14 percent attended workshops at international level).

- Women score high on account of goals setting abilities and analytical skills. Whereas, empirical analysis confirmed that qualifications, experience and self-motivation have significant impact on women representation at management cadre, but sample women were

short of these qualities therefore, were underrepresented at middle and top management levels in universities in Sindh.

- Top and middle management positions demand higher qualification as well as, long hours of professional dedication, but due to domestic responsibilities 43 percent sample women could not agree to devote longer hours at job and to acquire higher qualification for up gradation. This also is the cause of women's poor participation at senior academic and decision making positions in universities of Sindh.

- Better work environment motivate women faculty to energetically take part in teaching, management and research. However, study found that 23 percent sample women were not having separate space, with required facilities, for their research work, and 24 percent sample women did not rely on their colleagues.

- On personality traits 36 percent sample women reported as introverts, these women lacked communication initiative, which in the required quality, for effective leadership, while 57 percent sample women fall under extrovert personality trait. These women found to be major initiative taking personalities unlike introverts. These extrovert women were courageous and competent enough to take leadership roles.

- Under openness personality trait 76 percent of sample women were found to be having the compatibility to supervise and management. While in contrast, 12 percent of sample women did not qualify to take management responsibilities.

- Overall sample women reported as agreeable in nature but their extremely agreeable nature (i.e. 38 percent of sample women) is not suitable for senior management positions.

- Women are reported as dutiful (i.e. 87 percent) and have potential to achieve institutional goals.

- Sample women also lacked the required confidence (i.e. 28 percent). This is the negative aspect of their personalities that undermine their capacities to take the responsibilities of management at university level.

- It is concluded that women have abilities to participate at equal level with men, but due to various direct and indirect factors, are not equally represented at academic and management cadre in universities in Sindh.

- It is suggested that education policy should be made more effective and its implementation be ensured for the improvement of the ratio of female enrolment in, both female-dominating traditional courses (i.e. medical, education, nursing etc.) and non-traditional courses (i.e. engineering, commerce, finance, management etc.). Consequently, women will be able to equally participate with men in male dominating Higher Education Institutions (such as engineering) and at those management positions, where women are invisible (such as director of finance).

- It is suggested that government should have to increase its budget allocation on education sector and educational institutions should be upgraded, with the provision of necessary infrastructure to improve the output and quality of education. This becomes necessary for higher accessibility of education particularly for girls, in low income households.

- There is need to develop a vision of concentration on tapping female faculty, in the pool, for equal gender representation in the universities in Pakistan as well as in Sindh. The priority areas should be the improvement in the standard of female faculty, without gender gap, at all teaching positions (i.e. lecturer, assistant professor, associate professor and full professor) in Higher Education Institutions (HEIs) in Pakistan.

- There should be an essential step-up in policy and its implementation, to ensure equal women participation from junior (i.e. lecturer and assistant professor) to senior teaching positions (i.e. associate professor and full professor) and from bottom to top management levels in universities in Pakistan.

- There is need to increase the numbers of Ph.Ds/specialized women in their respective fields by allocating scholarships predominantly for women. This will help women to be able to reach at senior academic positions and avail the opportunities at key decision making levels.

- It is suggested to organize special lectures/seminars for the development of research-writing skills, which may help to promote women faculty, up to senior academic and key management positions (i.e. Deans, Controller of Examination etc) in Higher Education Institutions (HEIs).

- It is recommended that more opportunities for training, workshops and management based short courses for women be provided, so that they will be to work side by side with men at top and middle management positions (such as Vice-chancellor, Pro-vice chancellor, Registrant, Controller of Examination, Deans, Director/Chairperson of teaching departments etc).

- It is suggested that various conferences and seminars be organized to create awareness among women, to balance between professional and domestic roles, proper utilization of their time at job, and to become more effective at academic and management cadre in Higher Education Institutions (HEIs) of Pakistan.

- There is need to develop the physical and social work environment in Higher Education Institutions (HEIs) of Pakistan to motivate women, to be able to participate enthusiastically, in management activities in Higher Education Institutions (HEIs) of Pakistan.

- Personality development sessions should be held for enhancing women management potentials and their self-motivation, to work at decision making positions in Higher Education Institutions (HEIs) of Pakistan.