Gender Discrimination in Higher Education in Pakistan: A Survey of University Faculty

Sadia SHAUKAT*
Aishah SIDDIQUAH**
Anthony WILLIAM PELL***

Suggested Citation:
Shauka, S., Siddiquah, A., & Pell, W.A (2014). Gender discrimination in higher education in Pakistan: A survey of university faculty. *Eurasian Journal of Educational Research*, 56, 109-126
http://dx.doi.org/10.14689/ejer.2014.56.2

Abstract

Problem statement: Gender disparity is a worldwide phenomenon. This disparity is not only with respect to opportunities and resources but also in rewards, and exists in all regions and classes. Gender disparity exists in the field of education as well. Females experience overt and subtle gender discrimination to some extent nearly at every stage of their career. Males represent the majority of the faculty of higher education institutes across the globe. Managerial positions are usually held by males, who not only have more decision making power but also have more opportunities of social networking. Women have to achieve a successful career at the cost of their family life.

Purpose of the study: The present study aimed at exploring the current situation regarding gender discrimination in the higher education institutes of Pakistan.

Method: Gender equality has been investigated by a questionnaire survey of 180 faculty members on the five aspects of the working environment, namely Decision Making, Professional Development, Utilization of Resources, Academic Affairs and Job Satisfaction.

Results and findings: Two-way analysis of variance shows that post-level is the strongest significant contributor to the differences in the five scores

* Corresponding Author: Dr. Faculty of Education, University of Education, Lahore,Pakistan, e-mail: sadaishch@msn.com
** Dr. Lahore College for Women University, Lahore, Pakistan, e-mail: dr2004_5@yahoo.co.in
*** Independent Consultant.e-mail: awpell1984@gmail.com

from the equality questionnaire. Gender contributes only in Decision Making, where females tend to be excluded.

Conclusions and recommendation:

There are significant differences in perceptions of gender equality that are attributable to the respondent's post-level. Those at the higher levels see less inequality. Those at lower levels, especially lecturers, see more. With a high proportion of females at the lecturer level, this can appear as a straight forward gender polarization of views, as happens with Professional Development, Academic Affairs and Job Satisfaction. The fact that the concurrent introduction of post-level into the analyses removes the significance of the gender variable points to the impact of the relatively few promoted females, who do not see inequalities in Professional Development and Academic Affairs. These promoted females will have high Job Satisfaction scores because of their achievement in acquiring their positions. This suggests real movement in Pakistani higher education in the direction intended by the adoption of national equality policies.

Keywords: Attitudes; Gender discrimination; Higher education; decision making, job satisfaction, academic affairs.

Introduction

Gender equity promotes economic growth. It can be assessed in terms of education, health care, economic, political, legal and social rights provided to the members of both genders (USAID, 2009). The World Bank has recommended investment in female education as a strategy for development and poverty reduction in developing countries as this yields high social rate of returns (Oxaal, 1997). For empowering women in all walks of life, the most basic and essential factor is the education (Lopez-Claros & Zahidi, 2005). Access to higher education is a priority for all countries, and where females have apparently attained parity, areas where they are still under-represented need to be addressed in both quantitative and qualitative terms (Jacobs, 1996; Morely, 2007). While in developed countries women now enjoy gender parity in access to higher education with 52% of tertiary students being female, in developing countries the proportion reaches just 27% (UNESCO, 2002).

Males represent the majority of the faculty in higher education institutes worldwide. UNESCO (2002) quotes 27% as the female percentage for Commonwealth universities, with the percentage for developing countries generally much lower at 10% for Ghana and 18% for Pakistan, for instance. Females are likely to experience overt and subtle gender discrimination (UNESCO, 2002). Lund (1998) reports female representation at 33.8 % for lecturers and 9.9 % for professors in Commonwealth countries. In developing countries, for example Uganda, Nigeria, Pakistan, Zimbabwe, Tanzania and Zambia, the gender disparity tends to be greater.

Managerial positions are usually held by males, who not only have more decision making power but also have more opportunities of social networking (Gracia, 2009). A Commonwealth Higher Education Management Service survey (Lund, 1998) reported that in universities of the developing countries, gender disparity was

highest in the most senior positions from vice-chancellors through to heads of department. Singh (2008) reports low female representation at Commonwealth universities for the posts of vice-chancellor, faculty dean and professor at 9%, 17% and 15%, respectively for data collected in 2006. Muhwezi (2003), reporting from Uganda, points out that the under-representation of women in top administrative positions further discourages women from even applying in future for posts which are highly pressurized and heavily demanding in terms of time. This illustrates the worldwide phenomenon that only a few universities are led by women (UNESCO, 2009).

Gender disparity in education is pronounced in South Asia and in Pakistan (UNESCO, 2002). The World Economic Forum (Lopez-Claros & Zahidi, 2005), reports that Pakistan is 56th out of 58 countries that have progressed towards gender equality. This is despite long enshrined legislation that gives both genders equal rights regarding work and working conditions in The Constitution of The Islamic Republic of Pakistan (NAP, 2004).This tends to be a reflection of the social and cultural nature of much the region. Contrasting the prevailing perceptions of gender role in Pakistan, Khalid (2011) distinguishes between conservatives, who promote the marginalization of women, and liberals, who believe in a full democratic role and female emancipation.

In their survey of faculty members of universities of Pakistan, Quraishi and Kalim, (2008) reported that female faculty experienced gender discrimination, and consequently had lower job satisfaction. Females are less likely to be included in the decision making process as they are under-represented on committees and very few hold the position of chair. This situation is not only an indication of underestimation of female faculty members, but also leads towards the insufficient flow of information towards them. Consequently, female faculty in Pakistan face discriminatory barriers in key elements of a gender inequality model; those of a strongly conservative national culture and the internal structure dynamic of the institution (Acker, 1994; Bond, 1996a; Smulders, 1998; UNESCO, 2002).

In terms of the higher education workplace, international research studies of *decision making*, defined by the level of the participation of faculty in the instructional, curricular and managerial areas (Keung, 2008), show that few females are in authority positions (Aikman & Unterhalter, 2007). In the working world women are considered less capable then men (Goheer, 2003) and are expected to be primarily house-managers (Alireza, 1987: Asian Development Bank, 2008). Decision making is male dominated, and women have little say in policy making even in institutions other than higher education, where teaching is carried out mostly by women (Blackmore & Sachs, 2007; Drudy, Martin, Woods, & O'Flynn, 2005; Lang, 2010).

Equal access to *professional development* is limited (UNESCO, 2009). As experiences and opportunities to refresh knowledge are gained formally through professional meetings and participating in workshops and conferences, female faculty in Pakistan are restricted by the nature of the society and find it difficult to build up job-related networks.

Gender discrimination in the *allocation and use of resources* is not uncommon in the workplace even in the more developed countries (Crosby, 1984; Ensher, Grant-

Vallone, & Donaldson, 2001; Greenhouse, 2004). In higher education, females generally have less access to resources (Bond, 1996a), although where access is available, there is evidence that females will make use of the opportunities (UNESCO, 2002).

Though women have a measure of success in higher education in the more developed countries, they are still under-represented in *academic affairs* and the processes of administration, especially in the top positions of institutions (Bond, 1996b; NESSE, 2009; Singh, 2008; UNESCO, 2002).

Job satisfaction is considered a strong predictor of overall individual well-being (Diaz-Serrano & Cabral Vieira, 2005), and as Ensher et al. (2001) point out, gender discrimination can lead to loss of job satisfaction. In education, there is evidence of a positive relationship between perceived autonomy within the work setting and the sense of job satisfaction (Kreis & Brockoff, 1986). In Pakistan, a strongly prescribed working environment for females might be expected to lead to low job satisfaction.

Research Questions

From the literature review of the introduction, it is pertinent to test the degree of gender discrimination amongst faculty in Pakistani higher education. The issues to be addressed are the degrees to which five dimensions of the professional academic's job (i) *decision making,* (ii) *professional development*, (iii) *utilization of resources,* (iv) *academic affairs* and (v) *job satisfaction* represent gender discrimination. To assist in interpretation, profiles of responses will be broken down by gender, age and faculty post-level.

Method

Research design

To collect the opinions of faculty members regarding gender equality, a descriptive, survey type research technique was adopted.

Sample

One hundred and eighty faculty members from 10 universities responded to the questionnaire giving a response rate of 85%. Participants were selected through random sampling techniques. The personal details of the respondents appear in Table 1.

Table 1

Respondents' Personal Details

		Frequency	*Percentage*
Gender	Male	79	43.9
	Female	101	56.1
Age group	22-25	29	16.1
	26-30	35	19.4
	31-35	42	23.3
	36-40	44	24.4
	Above 40	11	6.1
	Missing	19	10.6
Post occupied	Lecturer	124	68.9
	Assistant Professor	38	21.1
	Associate Professor	7	3.9
	Professor	5	2.8
	Missing	6	3.3
Institution type	Public	153	85.0
	Private	23	12.8
	Missing	4	2.2

Research Instrument

A composite Likert type scale was constructed to collect data from the university teaching faculty on the five factors of gender equality. This section describes the scale development and the procedure adopted for data analysis. The instrument was presented in the English language.

Development of Questionnaire: Equal opportunity scale

Items were constructed from the international literature. *Decision making*, based on 8 statements drawn from the studies of Keung (2008); Caparros, Jimenez, and Pagola (2010). *Professional development,* based on 11 statements drawn from the studies of Hargreaves and Fullan, (1992); Arends, Winitzky, and Tannenbaum (1998); Darling-Hammond and McLaughlin (1995). *Utilization of resources,* based on 4 statements drawn from the studies of Crosby, 1984; Ensher et al., (2001); Greenhouse, (2004); Bond, (1996a); UNESCO, (2002). *Academic affairs*, based on 9 statements drawn from the studies of Lund (1998); Bond, (1996a) and Singh (2005). *Job satisfaction*, based on 4 statements drawn from the studies of Weiss, Dawis, and Lofquist (1967); Kendall (1963); Nagy (1996); Porter (1969) and Hackman and Oldham (1975).

Responses to the items were required on a five point strongly agree (5)/strongly disagree (1) scale.

Validity and Reliability

Factor analysis was used to determine the validity of the instrument. Each set of gender equality items corresponding to one of the five areas of academic practice was subjected to a principal components factor analysis to test item validity (Duff, 1997; Munby, 1997). Oblique rotation of the factor axes was then carried out to accommodate the very likely inter-correlation of factors should more than one be present (Norusis, 1990, p.334; Youngman, 1979, p. 102). Alpha maximization was then applied to the emergent factors (Youngman, 1979, p. 185), and the item scores of

the selected items then subjected to a further principal components factor analysis to confirm the unidimensionality of the final item scale (Gardner, 1995, 1996).

Data Analysis

Scores for gender equality on each of the five areas of academic practice were computed by summing the scores of the contributing items. The means and standard deviations were computed. t-test and ANOVA were applied to see the mean scores/item of different types of participants.

Results

Gender Equality in Decision Making Practices

Factor analysis showed two factors with eigenvalues greater than unity. The strong first factor accounted for 58.5% of the total item variance. The two items 9 and 10 of the second factor were rejected. The scores of the remaining eight items were re-factorized to test for unidimensionality. The single factor of eight items now took 67.8% of the total item variance and the scale computed from these items had an Alpha reliability of 0.93. Decision making is conceptualized most strongly in terms of *curriculum development endeavors* (item 2).

Table 2

Decision Making

Item	*Statement*	*M*	*SD*	*Factor loading*	*Correlation with total less item*	*n*
	You are provided with equal opportunities in					
1	Policy making issues	2.69	1.30	0.78	0.65	177
2	Curriculum development endeavors	3.06	1.27	0.89	0.84	177
3	Curriculum revision process	3.19	1.29	0.87	0.81	177
4	Curriculum Evaluation	3.03	1.22	0.88	0.82	177
5.	Curriculum Monitoring	3.02	1.24	0.86	0.80	177
6.	Finalization of objectives of programs	3.03	1.25	0.83	0.78	177
7.	Content selection for subjects of study	3.32	1.28	0.82	0.77	177
8.	Devising A.V. Aids	3.34	1.15	0.69	0.63	177
9.	Paper construction	3.99	1.02	0.40 Rej		177
10.	Preparation and reporting results	3.95	0.99	0.34 Rej		177
	Alpha reliability				**0.93**	166

Rej: item rejected from composite scale

From a breakdown of the mean scores/ item of the composite *Gender Equality in Decision Making Practices* scale in terms of the respondent's gender, nature of institution, post-level and age, significant differences were found for

- gender (males M=3.52, SD=0.86, n=78; females M=2.75, SD=1.02, n=100, p<1%, t-test, large effect size);
- nature of institution (Public M=3.00, SD=1.04, n=151; Private M=3.67, SD=0.72, n=23, p<1%, t-test, medium effect size);
- post-level (lecturers M=2.92, SD=1.01, n=123; more senior staff M=3.62, SD=0.88, n=49, p<1%, t-test, medium effect size).

There were some gender differences in responses, and these were greatest in *policy making issues* and *curriculum monitoring and evaluation.* All item means other than those for items 9 and 10 showed significantly lower scores for females at p<1% with medium to large effect sizes. Female means tended to be in the negative continuum of the scale (scores of 1 to 3), indicating perceived gender inequality.

Gender inequality was rated most highly by staff at the lowest post-level, who are female and work in public institutions. The lowest age group was populated entirely by lecturers, so in comparison with older, more senior staff, the youngest teachers give the strongest gender inequality ratings (youngest M=2.72, SD=0.93, n=29; oldest M=3.45, SD=0.92, n=54, t-test, large effect size). A three-way analysis of variance tests the relative strengths of the three breakdown variables and identifies as significant, gender (F=14.893, df=1, p<1%, large effect size) and post level (F=3.585, df=3, p<5%, large effect size).

Gender Equality in Professional Development Practices

Factor analysis of the item scores showed just a single factor accounting for 57.5% of the total item variance. This unidimensional factor comprising all the items provides a composite scale of Alpha reliability 0.92. Professional development is seen most strongly as concerning *research oriented tasks* (item 7) and *material development tasks* (item 9).

Table 3

Professional Development Practices

Item	*Statement*	*M*	*SD*	*Factor loading*	*Correlation with total less item*	*n*
	You are provided with equal opportunities in					
1	Participating in seminars/conferences/workshops	3.75	1.11	0.70	0.63	177
2	Cross cultural exchange programs	3.10	1.19	0.68	0.62	177
3	In-service refresher courses	3.41	1.28	0.74	0.68	177
4	Enhancing further qualification	3.47	1.27	0.72	0.65	177
5	Faculty exchange program	2.90	1.21	0.80	0.74	177
6	Capacity building training	3.25	1.18	0.83	0.78	177
7	Research oriented tasks	3.32	1.20	0.85	0.80	177
8	Developing and undertaking research projects	3.20	1.22	0.78	0.72	177
9	Material development tasks	3.11	1.21	0.85	0.81	177
10	ICT training	2.96	1.24	0.75	0.69	177
11	Attending international conferences	3.11	1.36	0.61	0.54	177
	Alpha reliability				**0.92**	177

From a breakdown of the mean scores of items of the composite *Gender Equality in Professional Development Practices* scale in terms of the respondent's gender, nature of institution, post-level and age, significant differences were found for;

- gender with males giving gender equality a higher rating (males M=3.46, SD=0.88, n=78; females M=3.05, SD=0.92, n=99, p<1%, t-test, small effect size), and
- post-level (lecturers M=3.13, SD=0.89, n=124; more senior staff M=3.64, SD=0.86, n=47, p<1%, t-test, medium effect size).

Gender differences in responses to the items of Table 3 are greatest in *capacity building training* and *ICT training* with females expressing more dissatisfaction.

As 82 of 96 females are at the lowest post-level of lecturer, it might be expected that lecturers give low ratings because they are female. However, a two-way analysis of variance shows that post-level is the unique significant variable (F= 4.575, df=3, p<1%, medium effect size).

Gender Equality in Utilization of Resources Practices

Factor analysis shows just a single factor accounting for 58.2% of the total item variance. This unidimensional factor comprising all the items provides a composite scale of Alpha reliability 0.76. Item loadings show that *Getting photocopy material for teaching purposes* (item 3) is the 'marker' for this scale.

Table 4

Utilization of Resources Practices

Item	*Statement*	*M*	*SD*	*Factor loading*	*Correlation with total less item*	*n*
	You are provided with equal opportunities in					
1	Using ICT (multimedia, projector, internet, computers, printer) facilities at work place	3.89	1.14	0.72	0.51	177
2	Using Library resources	4.12	0.95	0.75	0.53	177
3	Getting materials photocopied	3.80	1.14	0.84	0.66	177
4	Utilizing Support Services	3.59	1.16	0.74	0.53	177
	Alpha reliability				**0.75**	177

From a breakdown of the mean scores of items of the composite *Gender Equality in Utilization of Resources Practices* scale in terms of respondent's gender, nature of institution, post-level and age, significant differences were found for;

- nature of institution (Public M=3.79, SD=0.83, n=150; Private M=4.32, SD=0.83, n=23, p<1%, t-test, medium effect size), and
- age, with the youngest respondents (aged 22-25) giving gender equality a lower rating than older respondents (aged 31-35) (young M=3.55, SD=0.81, n=29; older M=4.12, SD=0.55, n=41, p<1%, t-test, large effect size);

For both females and males, mean scores of the items of Table 4 were in the positive continuum of the scale (3 to 5) indicating agreement with the equality provision statement. Only item 4, *Utilizing support services*, shows a significant gender difference with females being less convinced that there is gender equality.

A two-way analysis of variance performed on the data from respondents aged 35 years or under shows that both breakdown variables contribute to the lower scores (nature of institution, F=5.869, df=1, p<5%, medium effect size; age, F=4.260, df=2, p<5%, medium effect size). There are no significant age or institution effects.

Gender Equality in Academic Affairs Practices

Factor analysis showed two factors with eigenvalues greater than unity accounting for 65.1% of the total item variance. One item was then rejected after Alpha maximization of the very strong first factor, and the scores of the remaining nine items were then re-factorized to test for unidimensionality. The single factor of items now took 56.9% of the total item variance. A scale constructed from these nine items has a Cronbach Alpha reliability of 0.90. Item scores appear in Table 5.

Table 5

Academic Affairs Practices

Item	*Statement*	*M*	*SD*	*Factor loading*	*Correlation with total less item*	*n*
	You are provided with equal opportunities in					
1	Selection of courses	3.39	1.19	0.80	0.63	176
2	Devising evaluation criteria	3.34	1.16	0.85	0.75	176
3	Resolving disciplinary issues	3.39	1.14	0.82	0.70	176
4	Formulation of rules and regulation	3.07	1.26	0.85	0.77	176
5	Updating library resources	3.29	1.17	0.74	0.59	176
6	Modifying and updating examination rules	3.02	1.29	0.70	0.71	176
7	Setting time table schedule	3.27	1.24	0.53	0.66	176
8	Distribution of credit hours	3.15	1.29	0.53	0.66	176
9	Allocating exams duties	3.26	1.18	0.53	0.64	176
10	Arranging co-curricular activities	3.35	1.15	0.36 Rej		176
	Alpha reliability				**0.90**	176

Rej: item rejected from composite scale

From a breakdown of the mean scores of items of the composite *Gender Equality in Academic Affairs Practices* scale in terms of the respondent's gender, nature of institution, post-level and age, significant differences were found for;

- gender with males giving gender equality a higher rating (males M=3.50, SD=0.82, n=78; females M=3.04, SD=0.94, n=98, p<1%, t-test, medium effect size), and
- post-level with the higher professorial ranks much more satisfied about gender equality (lecturers M=3.08, SD=0.89, n=121; most senior staff of professor/associate professor M=4.24, SD=0.55, n=11, p<1%, t-test, large effect size).
- age with the younger respondents (aged 22-35) giving gender equality a lower rating than older respondents (aged above 35) (younger M=3.04, SD=0.86, n=63; older M=3.45, SD=0.89, n=94, p<1%, t-test, small/medium effect size).

A gender analysis shows that females feel less satisfied in five of the ten areas: *selection of courses, devising evaluation criteria, resolving disciplinary issues, formulation of rules and regulation* and *setting timetable schedules*.

A three-way analyses of variance shows that only the post-level breakdown variable contributes significantly to the Gender Equality in Academic Affairs score

variation (F=4.723, df=3, p<1%, large effect size): the apparent age and gender effects are due to their association with post-level.

Gender Equality in Job Satisfaction Practices

Factor analysis shows just one factor accounting for 68.4% of the total item variance. A four-item scale constructed from these items has a Cronbach Alpha reliability of 0.85. O*ut of turn promotion* (item 2) and *discussion of the confidential reports* (item 3) are the strongest indicators of job (dis)satisfaction (Table 6).

Table 6

Job Satisfaction Practices

Item	*Statement*	*M*	*SD*	*Factor loading*	*Correlation with total less item*	*n*
	You are provided with equal opportunities in					
1	Service incentives	3.18	1.22	0.77	0.61	178
2	Out of turn promotion	2.72	1.19	0.86	0.73	178
3	Discussion of the confidential reports	2.75	1.22	0.86	0.73	178
4	Promotion of turn	2.88	1.21	0.81	0.66	178
	Alpha reliability				**0.85**	178

From a breakdown of the mean scores of items of the composite *Gender Equality in Job Satisfaction Practices* scale in terms of the respondent's gender, nature of institution, post-level and age, significant differences are found for;

- gender with females rating more inequality with a lower score (males M=3.12, SD=1.06, n=79; females M=2.70, SD=0.91, n=99, p<5%, t-test, small effect size), and
- post-level with the higher professorial ranks much more satisfied about gender equality having already received their promotions (lecturers/assistant professors M=2.82, SD=0.96, n=161; most senior staff of professor/associate professor M=4.23, SD=0.75, n=11, p<1%, Mann-Whitney test, large effect size).

A gender analysis shows that females report less equality of opportunity in matters of promotion (items 2 & 4).

Ten of the eleven senior faculty (associate and full professors) are aged 36 and above, which leaves 22 respondents in this age range with relatively low job satisfaction (Senior staff M=4.15, SD=0.74, n=10; Others in this age range, M=2.53, SD=0.93, n=22, p<1%, Mann-Whitney test, large effect size). The result of this is an insignificant U-shaped distribution of Gender Equality in Job Satisfaction scores with age with a maximum in the 36-40 range.

A two-way analysis of variance shows that the post-level breakdown variable contributes to Gender Equality in Job Satisfaction variation significantly (F=7.526, df=3, p<1%, large effect size), whereas gender does not.

Discussion and Conclusion

At the micro-level of the individual items, gender differences with medium or large effect sizes identified *policy making issues* and *curriculum monitoring and evaluation* as major areas of perceived discrimination in decision making. This supports the earlier findings in Pakistan of Quraishi and Kalim, (2008) and in international surveys (Lund, 1998; Singh, 2008).

It is consistent to find the professional development areas of *capacity building training* and *ICT training* showing gender discrimination ratings as these are skills that potential decision makers require. Gender parity is more evident when it comes to the availability and use of resources, although even here there is evidence that additional support might not be readily forthcoming. The evidence from this item analysis does not support Bond's conclusion that females lack access to resources in higher education (Bond, 1996a).

A number of items related to academic affairs show gender effects. With effect sizes being small, it is deduced that the significant differences in responses to items such as *devising evaluation criteria* and *formulation of rules and regulations* are a consequence of discrimination in decision making practices. The academic affairs items effectively operationalize this discrimination.

The females feel discriminated against in matters of promotion, is wholly consistent with their under-representation in the higher post-levels (Lund, 1998: UNESCO 2002; Singh, 2008). The small effect sizes for significant gender differences does suggest that this might not be such a strong factor for as many females as are aspects of decision making.

These findings seem to be conclusive. There are significant differences in perceptions of gender equality that are attributable to the respondent's post-level. Those at the higher levels see less inequality. Those at lower levels, especially lecturers, see more. With a high proportion of females at the lecturer level, this can appear as a straight forward gender polarization of views, as happens with Professional Development Practices, Academic Affairs Practices and Job Satisfaction Practices. The fact that the concurrent introduction of post-level into the analyses removes the significance of the gender variable points to the impact of the relatively few promoted females, who do not see inequalities in professional development and academic affairs. These promoted females will have high job satisfaction scores because of their achievement in acquiring their positions.

Conclusion

The conclusion from the simple item analysis is that gender discrimination is felt most strongly in the area of Decision Making. Females register the sharpest inequality in *policy formulation* and *curriculum evaluation*. Promotion tends to lessen the dissatisfaction as post-level, like gender, is a large effect size contributor to the variation in scale scores. Professional Development is much more gender neutral and any significant female differences have small effect sizes. Indeed, when post-

level is taken into account, this variable removes gender from significance. Utilization of Resources does not appear to show any gender discrimination at all. An initial analysis shows gender discrimination in Academic Affairs, particularly in the area of curriculum evaluation, but the two-way analysis of variance locates the significant variation in scores with post-level. Over 85% of females are lecturers in this sample, so an interpretation of gender differences existing in Academic Affairs need to be treated with some care. Those feeling discrimination do so from different perspectives. It is misleading to draw the over-simplistic inference that some faculty members are happy with gender parity and some are not, with a sharp male/female divide. Misleading inferences about gender differences are well illustrated with the Job Satisfaction analysis where an initial gender effect disappears with a large effect size variation attributed to post-level. Females tend to get 'trapped' at the lower post-levels (Lund, 1998), so if there is no movement up the career ladder, research focused exclusively on the gender variable can carry a bias (Bond, 1996b). Only the extended analysis of variance for the Decision Making scale supports a significant female concern and this is complicated by the socio-cultural nature of Pakistani society.

The qualified gender discrimination in Decision Making suggests that there has been real movement in Pakistani higher education in the direction intended by the adoption of national equality policies. The establishment of the Fatima Jinnah Women University and a further six all-female universities more recently (HEC, 2012) is an important step in this direction. If paths to decision making are opened up, as expected, this could answer many of the remaining problems that females experience in co-educational institutions.

The latest Commonwealth Universities data (Singh, 2008), shows that the proportion of female professors in Pakistan has increased from 9% in 1997 to 20% in 2006, and the proportion of female associate professors/senior lecturers from 12% to 22%. In terms of absolute numbers, there has been a growth from 10 to 116 in the number of female professors and from 61 to 403 for female associate professors/senior lecturers over the nine year period. These data pre-date the expansion of the all-female universities, so the increasing female representation is primarily the result of the policies of the more liberal universities.

The current research shows that just over one half of the respondents sampled (Equality Positivists) were satisfied that discrimination has now been effectively eliminated from their institutions. This can be attributed to both legislation (NAP, 2004) and the intellectual levels of the faculty. Those universities showing real changes internally cannot, nevertheless, isolate themselves from the culture of the country so domestic duties, travel restrictions and social networking, can still deny females full gender equality.

The dual policy of liberal, essentially co-educational and all-female institutions seems to be worth persevering with given the gains of the former and the potential of the latter in the widely patriarchal, conservative society. Consistent with this policy, future gender discrimination studies might compare the views of academic faculty in all-female, in liberal co-educational and in conservative co-educational institutions. Extending the research design to include samples of students would provide evidence for the future direction of the dual gender policy for the two forms of institution.

References

Acker, S. 1994. Gendered education. Buckingham, Open University As cited in Lund, H. (1998). *A single sex profession: Female staff numbers in commonwealth universities.* London: Commonwealth Higher Education Management Service.

Aikman, S., & Unterhalter, E. **(**2007). *Practising gender equality in education*. UK: Oxfam GB.

Alireza, M. (1987). Women of Arabia. *National Geographic, 172* (4), 423-453.

Arends R.I., Winitzky N.E., & Tannenbaum M.D. (1998). *Exploring teaching*. New York: McGraw-Hill.

Asian Development Bank. (2008). *Releasing women's potential contribution to inclusive economic growth: country gender assessment – Pakistan.* Mandaluyong City, Philippines: Asian Development Bank.

Blackmore, J., & Sachs, J. (2007). *Performing and reforming leaders: Gender, educational restructuring and organizational change.* New York: State of New York Press.

Bond, S. (1996a). Women in leadership positions in higher education: Strategies for change. In *Management development for women in higher education*. London: Commonwealth Secretariat.

Bond, S. (1996b). The experience of feminine leadership in the academy. In M-L Kearney & A. H. R¢nning, (Eds.)*Women and the University Curriculum: Towards Equality, Democracy and Peace* (pp.35-52). London: Jessica Kingsley Publishers.

Caparros, M. J. M., Jiménez, M. J. L. & Pagola, A. I. E. (2010). Diagnosis of gender parity in universities: An indicator-based analysis. *Revista de Universidad y Sociedad del conocimiento, 7*(2), 1-14.

Crosby, F. (1984). The denial of personal discrimination. *American Behavioral Scientist, 27*, 371-386.

Darling-Hammond, L. and McLaughlin, M.W. (1995, April). Policies that support professional development in an era of reform. *Phi Delta Kappan,* 76(8), no pp., [electronic version].

Diaz-Serrano, L., & Cabral Vieira, J.A. (2005). *Low pay, higher pay and job satisfaction within the European Union: Empirical evidence from fourteen countries* , IZA Discussion Papers No.1558, Institute for the Study of Labour (IZA). Retrieved from http://ideas.repec.org/p/iza/izadps/dp1558.html

Drudy, S., Martin, M., Woods, M. & O'Flynn, J. (2005). *Men in the classroom: Gender imbalance in teaching*. London: Routledge.

Duff, A. (1997). A note of reliability and validity of a 30-item version of Entwistle and Tait's Revised Approaches to Studying Inventory. *British Journal of Educational Psychology*, 67, 529-539.

Ensher, E.A., Grant-Vallone, E.J., & Donaldson, S. I. (2001). Effects of perceived discrimination on job satisfaction, organizational commitment, organizational citizenship behavior, and grievances. *Human Resource Development Quarterly,*12, 53-72.

Gardner, P.L. (1995). Measuring attitudes to science: Unidimensionality and internal consistency revisited, *Research in Science Education 25*(3), 283-289.

Gardner, P.L. (1996). The dimensionality of attitude scales: a widely misunderstood idea, *International Journal of Science Education 18* (8), 913-919.

Goheer, N. A. (2003). *Women entrepreneurs in Pakistan: How to improve their bargaining power.* Geneva: International Labour Organization

Gracia, L (2009). Employability and higher education: contextualizing female students' workplace experiences to enhance understanding of employability development, *Journal of Education and Work, 22* (4), 301-318.

Greenhouse, S. (2004). *Woman sues Costco, claiming sex bias in promotions.* New York Times, C3. August 18. Retrieved from http://www.nytimes.com/2004/08/18/business/woman-sues-costco-claiming-sex-bias-in-promotions.html

Hackman, J.R., & Oldham, G.R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology, 60,* 159-170.

Hargreaves, A., & Fullan, M. G. (1992). *Understanding teacher development*. London: Cassell.

HEC. (2012). *HEC recognized universities and degree awarding institutions.* Retrieved from September 12, 2012 from http://www.hec.gov.pk/ourinstitutes/pages/default.aspx

Jacobs, J. A. (1996). Gender inequality and higher education. *Annual Review of Sociology, 22,* 153–85.

Kendall, L. M. (1963). *Canonical analysis of job satisfaction and behavioral, personal background, and situational data*. Unpublished doctoral dissertation, Cornell University.

Keung, C.C. (2008). The effect of shared decision-making on the improvement in teachers' job development. *New Horizons in Education, 56* (30).

Keung, C.C. (2008). The effect of shared decision-making on the improvement in teachers' job development. *New Horizons in Education, 56* (30).

Khalid, R. (2011). Changes in Perception of Gender Roles: Returned Migrants. *Pakistan Journal of Social and Clinical Psychology, 9*, 16-20.

Kreis, K., & Brockoff, D. Y. (1986). Autonomy: A component of teacher job satisfaction. *Education*, *107* (1), 110-115.

Lang, S. (2010). *A gender perspective on educational facilities*. Uppsala University, Sweden: OECD.

Lopez-Claros, A. & Zahidi, S. (2005). *Women's empowerment: Measuring the global gender gap*. Geneva: World Economic Forum.

Lund, H. (1998). *A single sex profession? Female staff numbers in commonwealth universities.* London: Commonwealth Higher Education Management Service.

Muhwezi, D. K. (2003). *Top university women administrators/managers as icons of inspiration, role models and mentoring for young women in universities in Uganda: A Case of Makerere University.* Retrieved from http://www.kahundha.com/wp-content/uploads/2011/09/Kahundha-Muhwezi-D.-Top-University-Women.pdf

Munby, H. (1997). Issues of validity in science attitude measurement. *Journal of Research in Science Teaching 34*(4), 337-341.

Nagy, M. S. (1996). *What to do when you are dissatisfied with job satisfaction scales: A better to measure job satisfaction.* Technical Affairs Section. IPACweb. Retrieved from http://www.ipacweb.org/acn/apr96/techaff.html

NAP (2004). *The Constitution of the Islamic Republic of Pakistan*. Islamabad: National Assembly of Pakistan. Retrieved from www.mofa.gov.pk/Publications/constitution.pdf

NESSE (2009). *Gender and education (and Employment): Gendered imperatives and their implications for women and men: Lessons from research for policy makers.* European Commission, Directorate-General for Education and Culture. Retrieved from http://www.nesse.fr/nesse/activities/reports/gender-report-pdf

Norusis, M.J. (1990). *SPSS Base System User's Guide*. Chicago: SPSS Inc.

Oxaal, Z. (1997). *Education and poverty: A gender analysis.* Report prepared for the Gender Equality Unit, Swedish International Development Cooperation Agency (SIDA). Retrieved from http://www.bridge.ids.ac.uk/reports/re53.pdf

Pell, T., & Hargreaves, L. (2011). Making sense of cluster analysis: Revelations from Pakistani science classes. *Cambridge Journal of Education, 41*(3), 347-367.

Porter, L.W. (1969). A study of perceived need satisfaction in bottom and middle management jobs, *Journal of Applied Psychology, 45,* 1-10.

Quraishi, U., & Kalim, R. (2008). *Gender based faculty development model for higher education*. Oxford Business & Economics Conference, June 22-24, Oxford: Oxford University.

Singh, J. K.S (2005). *Still a single sex profession? Female staff numbers in commonwealth universities.* London: The Association of Commonwealth Universities.

Singh, J. K.S (2008). *Whispers of change. Female staff numbers in commonwealth universities.* London: The Association of Commonwealth Universities.

Smulders, A.E.M. (1998). *Creating space for women: gender linked factors in managing staff in higher education institutions.* Paris: UNESCO, International Institute of Educational Planning.

UNESCO (2002). Women and management in higher education: A good practice handbook *Follow-up to the World Conference on Higher Education (Paris 5-9 October 1998).* Paris: UNESCO.

UNESCO (2009). *World conference on higher education: The new dynamics of higher education and research for societal change and development*, 5-8 July, Thematic Session: Learning, Research And Innovation, Panel III: Women in Higher Education, Research and Innovation (HERI). Paris: UNESCO

USAID (2009). *Pakistan economic performance assessment.* Nathan Associates Inc. for the United States Agency for International Development. Retrieved from http://www.countrycompass.com/_docs/assessments/Pakistan_Economic_Performance_Assessment_2009.pdf

Weiss, D.J., Dawis, R.W., & Lofquist , L.H. (1967). *Manual for the Minnesota satisfaction questionnaire* (Minnesota studies in vocational rehabilitation: X11). Minneapolis: University of Minnesota Industrial Relations Center, Work adjustment Project.

Youngman, M.B. (1979). *Analysing social and educational research data.* London: McGraw Hill.