

## Role of Gender in Household Health Expenditure Allocation in Pakistan

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### Abstract

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*In this study, gender patterns in allocation of health expenditure have been investigated for Pakistan. Using Household Integrated Expenditure Survey (HIES) data for the year 2010-11, the conventional Engel curve as well as the Hurdle Methodology have been employed to detect gender biasness. Gender discrimination has been studied at three decision stages: reporting sick, consulting medical practitioners, and incurring positive medical expenditure. Results indicate that the nature of discrimination varies by age cohort and type of health seeking behaviour. There is a pro-female bias among women above the age of 40 in health expenditure allocation and a pro-male bias in consulting a doctor in working age group (26-40). These results reflect the possibility that females above 40, in Pakistan, are in general more likely to develop severe sickness and thus incur higher medical expenditure. The results also reveal an interesting reversal of the pro-male bias in health expenditure that is present for younger age cohorts particularly in the working age sample. Additionally, there is variation in the likelihood of consulting a doctor in younger age group in rural areas and lower income group.*

**Keywords:** Health Expenditure, Gender Discrimination, Hurdle Model, Pakistan

### 1. INTRODUCTION

This study examines evidence of gender discrimination in health-seeking behaviour within households of Pakistan. The welfare of household members can vary substantially depending on resource allocation behaviour. The existence of a rich literature has evoked interest in understanding the issue

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of gender discrimination in resource allocation at the household level in developing economies (see Alderman and Gertler 1997; Alderman and King 1998; Deaton 1989; Subramanian 1996). Male members receive preference in terms of human capital investments particularly in the South Asian context as many households allocate a larger part of their resources towards them (see Sen and Sengupta 1983; Subramanian and Deaton 1991). Intra-household gender differences pertaining to educational and health expenditures have been a concern for many researchers recently (see Azam and Kingdon 2013; Gao and Yao 2006; Khanal 2018; Zimmermann 2012).

Several factors have been identified to explain gender differences within households but the investment motive is one of the more prominent explanations. Earlier studies on gender discrimination have been highly influenced by investment motive hypothesis initially proposed by Rosenzweig and Schultz (1982). Investment motive hypothesis implies that households are inclined to devote human capital investments on males because parents aim to maximize their returns on investment in their children. In both developed and developing countries, the expected labour market returns for males are better than females. Alderman and King (1998) further added that parents recognize that only male children will transfer cash to parents in their old age.

Some researchers believe that human capital investments are based on productivity of the individual household members. Gao and Yao (2006) highlighted that prime-aged men have higher opportunity cost of visiting a doctor and the relative cost increases with the relative market value of a family member. In a similar context, Mangyo (2008) incorporated various demographic groups and found nutrient-intake elasticity with respect to total household food consumption to be lower for prime-age men than for other demographic groups.

The relative bargaining power of household members also determines the distribution of resources within households. Literature suggests that as the mothers' bargaining power strengthens, they allocate a greater share of financial resources to activities that promote human capital formation such as education and medical expenditure (see Song, 2008; Khalid and Khan, 2012). Song (2008) elaborates that a mother's higher bargaining power does not reduce gender discrimination; young boys are preferred over young girls in terms of medical care or education expenditures.

The issue of gender bias within households has been mainly examined along the dimensions of education, food, and health expenditures. Earlier studies, while studying the gender pattern in the allocation of resources within households, have focused more on the consumption expenditure. Most studies (Deaton 1989; Subramanian and Deaton 1991) looked at household level

consumption expenditure data to examine the presence of gender discrimination. In this setting, Mangyo (2007) analyzed how changes in household per capita nutrient intake affect the intra-household allocation of nutrients. He estimates how the nutritional intakes of individuals from different age groups and sex respond to changes in total household food. Gender bias in terms of education expenditures within households has been extensively studied (Kingdon 2002; Kingdon 2005; Kingdon and Aslam 2008; Himaz 2010). According to Ray (2000), education is the principal item exhibiting gender bias in household spending in South Asia, instead of food or nutrition. A relatively recent study by Khanal (2018) has also found parental expenditure patterns in education to be discriminatory in case of Nepal.

Pakistan ranks 130th out of 159 countries in terms of the Gender Inequality Index (GII) which is much lower as compared to other countries. The index is constructed by United Nations Development Programme (2015), that captures inequality between women and men along three dimensions (reproductive health, empowerment, and the labour market). Empirical analysis of gender discrimination needs to be studied in detail at both micro and macro levels for Pakistan. Very little empirical work has been done to analyze the household level gender discrimination in human capital investment particularly in health care utilization behaviour in Pakistan to the researcher's knowledge.

Existing literature relevant to Pakistani setting encompasses discrimination in food expenditure, education, school enrolments, and healthcare. Deaton (1997) first studied the allocation of consumption expenditure in case of Pakistan. Alderman and Gertler (1997) have found that demand for medical care is more income elastic for girls than males in Pakistan. Hazarika (2000) found that male preference exists in access to healthcare and not nutrition in the case of children in Pakistan. However, Ali (2000) has found no evidence of gender discrimination in children in reporting sickness and health care utilization by employing a different dataset. Kingdon and Aslam (2006) observed pronounced discrimination against girls, in terms of spending on schooling in Pakistan. Yusuf (2013) documents pro-male bias in school level enrolment in rural domain of Punjab, Pakistan. In light of the above researches, the present study investigates the prevalence of gender discrimination in household health expenditure in Pakistan.

One limitation in modeling health expenditure using traditional estimation approaches such as OLS is that data is characterized by zero or non-zero values. In order to overcome this factor, the two-part models and the generalized linear models have been employed as viable alternatives (see Gao

and Yao, 2006; Matsaganis, Mitrakos and Tsakoglou, 2009). The two-part model has been estimated for multivariate analysis by Gao and Yao (2006). The first model is the unconditional probability of getting treatment and the second model is the probability of incurring positive expenditures. In the last model, the dependent variable is the logarithm of the amount of curative expenditure.

Deaton's Engel curve methodology has also been frequently used to study gender discrimination while examining household allocation behaviour. The study by Kingdon & Aslam (2006) demonstrates that the Engel curve has failed to pick up a gender bias in schooling expenditure in India. The Hurdle methodology was proposed to evaluate not only the gender bias but also the channels of gender biasness. The Hurdle Model has been carried out in two stages by Kingdon & Aslam (2006); in the first, it estimates the probability that the household spends anything on education; and in the second, it estimates the natural log of educational expenditure conditional on positive spending. Recently, Irving & Kingdon (2008) also adopted the hurdle methodology to explore gender bias health expenditure allocation in South Africa.

Intra-household differences in human capital investment is a prominent phenomenon in resource constrained settings, as discussed earlier. While numerous studies have examined health and education expenditure on children, it is worth investigating differential patterns of health expenditure and behaviour across genders for older age cohorts in the case of Pakistan. This will highlight the specific demographic for which a bias is most pronounced and provide insight into household resource allocation decisions. Specifically, this study will test whether investment value hypothesis applies at certain ages, given the differing roles and perceived contributions of men and women in a household. Based on the previous researches, the researcher will employ the Hurdle methodology to identify the channels of bias. The results from the Hurdle Model will be compared with conventional Engel curve approach, to accurately study the extent of biasness. However, the study will be restricted to household level, as expenditure data cannot be disaggregated at an individual level. Furthermore, the comparison between urban and rural households will also be carried out to deeply understand how factors that impact the decision level in allocating resources differ between two regions. Finally, the analysis will be conducted for poor and non-poor households as well.

The paper proceeds as follows: section II presents the theoretical framework, section III gives an important understanding of data and descriptive statistics of important variables. Section IV explains the empirical strategy employed and while section V gives results, section VI provides the concluding remarks.

## 2. THEORETICAL FRAMEWORK

To examine the gender discrimination in intra household allocation of resources, the researcher has used the theoretical model by Rosenzweig and Schultz (1982). The underlying assumption of the model is that household's tend to maximize utility over a period of time, by maximizing household returns from investment in health. Let us assume one-period household model with male and female members. The household has a utility function, given by:

$$U = U(x_h, w_m, w_f) \quad \dots (1)$$

where  $x_h$  a jointly consumed aggregate health expenditure, and  $w_m$  and  $w_f$  is the wealth of each male and female member (which are treated as continuous variables). The household can allocate resources to each member of the household as investment in human capital. Each male and female member contribute  $w_m$  and  $w_f$  respectively, to family resources, through direct labour contributions or transfers.

Each individual's wealth depends on his human capital in the following manner:

$$w_m = mH_m \quad \dots (2)$$

$$w_f = fH_f \quad \dots (3)$$

where  $m$  and  $f$  are the respective returns to investment in human capital. According to Rosenzweig and Schultz (1982), market returns to males' human capital is higher than females, thus  $m > f$ . Since market returns to males are more than females, it is expected that households tend to spend more on economically productive members of the household. There is a tradeoff across household members, therefore, different amounts are allocated on different members based on the perceived returns.

## 3. DATA

The study is based on the Household Integrated and Economic Survey (HIES) for the year 2010-11. This is a cross sectional dataset covering 16,341 households with 108,933 individuals. The HIES provides important data on household social and economic characteristics, at national and provincial levels with urban and rural breakdown. It is one of the few data sets for Pakistan that contain information on household member's health decisions and details about

health expenditures, making it particularly well-suited for examining intra-household resource allocation decisions. The dataset also includes expenditures by various items in both durable and non-durable goods and services. Additionally, it consists of comprehensive details on community characteristics relating to availability of facilities and infrastructure.

The paper investigates the pattern of household health expenditure across age groups and gender. The key variable used for analysis is the budget share of health expenditure out of the total household expenditure. The health expenditure combines purchase of medicines, medical fees, and hospitalization charges incurred by a given household over the year. The kernel density of household medical budget share shows that this variable is log-normally rather than normally distributed (Figures 1, 2).

Descriptive statistics by age and gender demonstrate that across all age groups, females are more likely to report sick than men (see Table 1). Test of significance portray similar results that women as compared to men have higher tendency to report and consult medical practitioner. However, among younger age cohort i.e. (less than 15) data reveals a pro-male bias in reporting sickness and consulting a medical practitioner. Additionally, a graphical illustration of data indicates that households in both urban and rural domains have pro-female bias in healthcare utilization except for the less than 15 age group (refer to figures 3a, 3b,3c,3d,3e, 4a,4b,4c,4d &4e). The observations suggest a rigorous econometric analysis to validate these findings.

Table 2 shows that on average households allocate 3.5% of total household budget to health, while rural areas spending a larger share (4%) as compared to urban areas (3%). Health seeking behaviour varies across provinces as households in Khyber Pakhtunkhwa (KPK) and Punjab spend more on health expenditure possibly because of variation in income levels, education and other factors. The budget share for health expenditure in Balochistan is alarmingly low at 1%. Household characteristics vary considerably for poor and non-poor households. The average per capita expenditure and income for instance, show considerable disparity in absolute terms.

Socio-demographic variables have been constructed for urban rural regions, poor & non-poor households and at provincial level to describe the profile of the data (refer to Table 2). The variables include household head education (average years of education attained), dependency ratio (Dependency ratio is defined as the ratio of dependents-ages younger than 15 or older than 64-to the working age population (ages 15-64) according to World Bank (2015), percentage male household heads and household income. Community level variables have also been included in the analysis to reflect on the

development of the community. Variables include houses having electricity as source of lighting, access to the hospital, and proportion of households with toilets. Urban areas display better community characteristics as compared to rural areas.

#### 4. METHODOLOGY

##### 4.1. Engel Curve

First, the study employs conventional Engel Curve methodology formulated by Working (1943) and later applied by Deaton (1989) to detect gender discrimination in household allocation. Engel Curve is an indirect technique to make inferences about gender discrimination in household consumption or expenditure patterns using household level data. The Engel Curve equation can detect gender bias in health expenditure by linking budget shares on educational expenditure with total household expenditure and the demographics. The demographic composition of the household is incorporated in the model to observe the marginal effects on the expenditure of a particular good. The rationale behind the Engel Curve approach is that if there is no gender discrimination, the addition of a male or a female in a particular age cohort will have identical marginal effect on the share of health expenditure. The study investigates how the presence of individuals of similar ages but opposite sexes affects expenditure on health using household level data. The data constraints allow only for indirect comparison of health expenditure on males and females.

The first equation is the Working-Lesser Engel form, estimated at household level as follows:

$$w_i = \alpha + \beta \ln \left( \frac{x_i - n_i}{n_{ki} / n_i} \right) + \lambda \ln n_i + \sum \theta_k \varphi_{zi} + \mu \quad \dots (4)$$

where,

$w_i$  is the share the health expenditure out of the total expenditure of the  $i$ th household;

$x_i$  is total expenditure per household;

$n_i$  is household size;

$\ln (x_i / n_i)$  is the natural log of total per capita expenditure;

$n_k$  is the number of people in age-sex class  $k$ ;

$n_{ki} / n_i$  is the fraction of the household members in the  $k$ th age-gender class;

$z_i$  is a vector containing household characteristics such as the education, sex of the household head, dependency ratio, household size, proportions households having electricity and toilet facility, and dummy variables to capture province and region.

$\mu_i$  is the error term..

To study gender discrimination by age groups, the researcher has separated the sample into five age cohorts. i.e. young (age 0 - 15); an intermediate group (age 16 - 25); a prime age working group (age 26 - 40); a middle-aged working group (age 41 - 60); and the elderly (include 60 and above). The age categories are important because health decisions show disparate behaviour across age groups.

The coefficient  $\beta$  determines whether the good is a luxury or a necessity. If  $\beta > 0$ , it indicates the good to be a luxury item and if  $\beta < 0$  then it implies that the good is a necessity. In the present study, health is assumed to be a necessity, so it is expected that  $\beta < 0$ . To detect gender bias in the allocation of goods, coefficients of age-gender composition  $n_{ki} / n_i$  are used. The  $\theta_k$  coefficients explain how the change in household composition influences the household's budget allocation on health expenditures. The F test is conducted to identify whether gender differential treatment exists across the genders. The null hypothesis is  $\theta_{km} = \theta_{kf}$ ; implying that no gender difference exists in allocation of health expenditure. While alternative hypothesis states that  $\theta_{km} \neq \theta_{kf}$ , pointing out to gender differential treatment in allocation of health expenditure. The model is fitted on the sample of all households regardless of whether the household incurs a zero or positive budget share of health expenditure.

## 4.2. Hurdle Model

A general consensus prevails that Engel Curve methodology by Deaton (1989) fails to capture the gender discrimination. Deaton has declared it to be a 'puzzle' since the results from studies show no existence of gender discrimination even when there is strong gender biasness apparent in data. Kingdon (2005) proposed that the Hurdle Model can better detect gender biasness by highlighting the channels of gender discrimination within households. The Double Hurdle (DH) model was initially proposed by Cragg (1971), the DH modeling framework is a two-stage generalization of the Tobit model's treatment of truncated dependent variables. The DH model assumes that a household's decision to participate in health seeking behaviour may be governed by different criteria from those guiding the household health

expenditure level. According to Wooldridge (2002), Hurdle Model can be carried out in series of steps. The Hurdle methodology adopted by Aslam & Kingdon (2008) is directly relevant to the present research, as it has examined gender discrimination in education expenditure using Pakistani household data at four decision stages. Decisions related to health go through the following stages:

- i. Does an individual report being sick (S=1 or S=0)?
- ii. Conditional on having reported sick (S=1), does the individual consult a medical practitioner (D=1 or D=0)?
- iii. Conditional on having consulted (D=1), does the individual report any positive medical expenditure (M=0 or M>0)?
- iv. Conditional on positive expenditure, how much is spent on medical care (E (M))?

The first equation of Hurdle Model is the probability of whether an individual in a household reports sick or not in last two weeks:

$$P(S = 1) = \alpha + \beta \ln \left( \frac{xi - ni}{nki - ni} \right) + \lambda \ln ni + \Sigma \theta k + \varphi zi + \mu i \quad \dots (5)$$

The second Hurdle equation is a probit estimation of anyone in the household consulting a medical practitioner, conditional on reporting sick:

$$P(D = 1|S = 1) = \alpha + \beta \ln \left( \frac{xi - ni}{nki / ni} \right) + \lambda \ln ni + \Sigma \theta k + \varphi zi + \mu i \quad \dots (6)$$

In the third Hurdle equation probit model is estimated, which specifies whether anyone in the household incurs positive medical expenditure, conditional on visiting a medical practitioner:

$$P(M = 1|D = 1) = \alpha + \beta \ln \left( \frac{xi - ni}{nki / ni} \right) + \lambda \ln ni + \Sigma \theta k + \varphi zi + \mu i \quad \dots (7)$$

Finally, the OLS of conditional budget share of medical expenditure of household i.e., conditional on incurring positive medical expenditure has been estimated.

$$\ln wi = \alpha + \beta \ln \left( \frac{xi - ni}{nki / ni} \right) + \lambda \ln ni + \Sigma \theta k + \varphi zi + \mu i \quad \dots (8)$$

In the hurdle decision stages, the study aims to assess whether significant difference exists between the two genders in terms of reporting sick, consultation rates, incurring medical expenditure, and finally average medical expenditure. As in the Engel Curve equation, the F test can be carried out to identify whether there is statistical difference between the age-sex coefficients. The null hypothesis will be that the coefficients on the male and female variables within each age cohort are equal i.e.  $\theta_{kf} = \theta_{km}$ . The alternative hypothesis will be that coefficients on the male and female of same age category are not equal, asserting the presence of differential treatment between males and females i.e.  $\theta_{kf} \neq \theta_{km}$ . This will identify possible channels of bias by testing whether there is a gender difference in the probability of reporting sickness, probability of consulting a doctor, or probability in incurring positive medical expenditure. Finally, it tests whether the bias in allocation is generated from difference in actual medical expenditure incurred.

The household level analysis will be disaggregated at urban and rural level. This will give deeper understanding about possible gender discrimination, as the characteristics between rural and urban areas differ as discussed in the data section. Furthermore, gender discrimination behaviour in health expenditure is investigated separately for poor and non-poor households.

## **5. RESULTS AND DISCUSSION**

### **5.1. Household Level Analysis**

Table 3 presents the results of household level estimations using the Engel curve methodology and the Hurdle Model. The results in Column (1) are based on the conventional Engel Curve and use the budget share of health expenditure as a dependent variable. The age-gender composition variables have been included to see impact on the household demand for health services. The researcher has also controlled various household characteristics including the log of household per capita expenditure, log of household size, the z-vector variables including the dummy variables for gender of the household head, regional and provincial dummies, and community variables that include proportions of households with flushing toilet facility and electricity availability. Engel Curve estimation is also referred to as unconditional OLS (Ordinary Least Squares) as it includes all households irrespective of the share of health in their budget.

The coefficient of log expenditure per capita as presented in column (1) is negative and significant, showing that demand for medical services is treated as a necessity in households across Pakistan. As explained by Working

(1943), goods are considered necessities if their share from total budget decreases as total expenses increase, hence, its total expenditure elasticity is less than unity.

The coefficient of log household size is significant and has a negative sign. This could be an evidence that larger households are less inclined to spend on their health because maybe they are allocating resources for provision of food and shelter. Provincial dummies show that only Khyber Pakhtunkhwa (KPK) has higher share of health expenditure as compared to Punjab, which is the excluded category.

The primary coefficients of interest are the age-sex cohorts, as they exhibit gender discrimination in household health expenditure allocation in Pakistan. The F-test has been used to determine whether there are any statistical differences between the coefficients of males and females in the same age group. The p-values for F test, mentioned in last four rows of Table 3, show that there are no gender effects on health expenditure within households in Pakistan. This result is aligned with previous Engel Curve estimations found in literature as Deaton (1997) has remarked this as a ‘puzzle’ because this methodology has consistently failed to detect gender differentiation within households.

Results from the Hurdle Model have been presented in Table 3 that assist in identifying possible channels of gender bias. The column (2) presents the results of probit estimation where dependent variable is whether anyone in the household has reported sick in the last two weeks. The Column (3) presents result from second hurdle i.e., the probability of any person consulting medical practitioner from a household, conditional upon reporting sick. The Column (4) presents estimates from third hurdle i.e., the probability that the households spend positively on health, conditional on consulting a medical practitioner. The last column is the OLS of the natural log of the conditional medical budget share, i.e., conditional on having positive medical budget share.

The coefficient of log expenditure per capita is negative and significant for conditional OLS equation that reiterates *Engel's law* that as household income increases, the proportion of expenditure on necessities decreases. The education of the household head affects health care spending behaviour as the coefficient is significant across all three stages of hurdle equations. The household head's education is negatively associated with probability of reporting sick, incurring positive health expenditure and conditional household health expenditure. Log of the household size affects household health decisions positively as larger households have higher probability to report sick,

consult medical practitioners, and incur positive health expenditure. However, conditional upon having incurred positive household health expenditure the level of healthcare spending decreases with household size because larger households have to allocate resources for provision of basic necessities.

The main variables of interest are demographic variables that highlight patterns of household health expenditures in Pakistan. The results of the Hurdle Model contrast with the Engel curve since in the latter, the results were unable to detect the role of gender in household health expenditure. The p-values of the F-test for equation 2 mentioned in Table 3 demonstrate that there is noticeable pro-female bias in probability of reporting sick in three age groups: age 16-25, age 41 till 60 and age 60 and above. This can be attributed to the fact that women participate in childbearing and rearing, that affects their health condition such that they tend to report sick more frequently as compared to males. The p-values show pro-male bias in age group 26-40 and pro-female bias in age group 60 and above. An additional female member in age group 26-40 reduces probability of consulting a medical practitioner. Lastly, Column (5) provides estimates of the conditional expenditure using OLS and shows a pro-female bias in the age group 41-60 and 60 and above. In households with a positive expenditure on health, women incur a greater expenditure than that incurred by men of these two age groups.

Overall, there is an existence of pro-female bias in health expenditures at the household level. Household level regressions portray gender disparity in health behaviour in higher sickness reporting by women than men in the prime-age and elderly age categories. The younger women (16-40 age group) are in childbearing age that explains the reason to report sick more than the men. These results are, however, consistent with the findings of earlier study by Yao (2006) with regards to bias in allocation of health expenditure. The plausible explanation for female bias in age groups above 40 is that they are unable to consult a doctor for mild sickness that can eventually impact their health at a later stage in life. The results of consulting a medical practitioner provide existence of pro-male bias in the working age group of 26-40, as males in the working age group are more concerned about their health status since they are cognizant of the strong association between health status and economic wealth. World Bank (2005) explained that women in Pakistan consult doctor less frequently due to mobility constraints and absence of decision making.

The households have an altogether different approach in the case of health care spending as women incur higher expenditures than males. It is established that women in Pakistan are characterized by a higher incidence of disease as compared to men. Pakistani women are more prone to diseases such

as osteoporosis and tuberculosis (see Codlin *et al.*, 2009). Raj (2010) ascribes higher incidence of disease among women in Pakistan to the rise of early marriages and young girls giving birth. Early age pregnancy increases complications that have an impact on the health of the mother at later stages.

## **5.2. Urban-Rural Analysis**

Household level analysis, further disaggregated at urban and rural levels, is used to explore how patterns of gender discrimination may vary between the two regions (Tables 4, 5). The Urban-Rural breakdown shows interesting insights about the differential treatment of household pertaining to health expenditure. Households in urban areas have female bias in most cases as shown in Table 4. Females in urban households' report sick more than males, however, there was no bias in case of consulting a doctor. Likewise, there is pro-female bias in age groups above 40 in case of conditional health expenditures in urban region. Women might have greater incidence of disease or other health concerns than males in urban areas leading to higher conditional health expenditures. The bias against female manifests itself in rural areas where males are preferred over females in case of consulting a doctor (refer to Table 5). It has been seen that men in age group 26-40 in rural households consult doctors more than females do. Pro-female bias in age group 41-60 persists in the conditional medical expenditure, highlighting the higher occurrence of disease among women in rural areas.

## **6. Difference in Poor and Non-Poor Households**

In addition, the study determines whether households are income responsive to health expenditure allocation so the analysis has been conducted for poor and non-poor households separately. Average income for poor and non-poor households reveal a gap as mentioned in the data section. We investigated the allocation behaviour for health and found that log expenditure per capita is negative and significant indicating that poor households consider health expenditure to be a necessity. Table 6 present the estimates of poor households where a pro-female bias is observed in reporting sick and conditional health expenditure equations, while we notice a pro-male bias in consultation behaviour in age 16-25 and age 26-40. Estimates for richer households in Table 7 detect pro-female bias across all hurdles.

Results indicate that income of the household also determines health utilization behaviour as we see more male-bias in consulting a doctor within poor households. Younger age cohort is favoured in consulting a doctor

possibly because they are the most productive demographic group, thus, their health status is important. Households in upper-income quintiles prefer women since women report sick more than males and eventually consulting doctor and incurring medical expenditure occurs more than among the males.

## 7. CONCLUSION

The present paper empirically tests the prevalence of gender discrimination in the allocation of health resources within Pakistan. In particular, it aims to analyze whether patterns of gender discrimination are consistent with the 'market value hypothesis'. Abundant literature is available on 'market value hypothesis' as a reason why males are given preference over females, particularly in terms of human capital investments in South Asia. The current study uses the PSLM-HIES for the year 2010-11. For Pakistan, the study employs the Engel Curve and Hurdle Methodology to test the said hypothesis.

The results have shown substantial evidence of pro-female bias within households in Pakistan. The study has analyzed healthcare utilization across all ages, and it has established that households have an altogether different approach in the case of health care spending as women incur higher expenditures than males. The conditional expenditure equation shows that females have higher health expenditure than males in the age group 41-60 and above 60. However, the second stage of hurdle documents pro-male bias in the 'consulting medical practitioner' in the age cohort 26 till 40. This is prime working age-group for males, so they are more likely to consult doctors in order to maintain good health status to ensure economic well-being. On the other hand, females in Pakistan generally have higher severity of sickness in later stages of life. Interestingly, in rural areas and poor class, men consult doctor more than women do, provided women report sick with higher frequency than males.

Altogether, this study provides considerable implications regarding developments in the field of health economics. It is widely recognized that Pakistan struggles in producing improved health outcomes for women especially in rural areas and within lower income groups. The results indicate high incidence of women reporting sick, thus the imperative of improving healthcare services for women cannot be understated. However, the present research does require the support of individual data of health expenditure. The potential for researching this subject further is substantial and indeed the subject does warrant greater exploration and understanding.

### Appendix

Figure 1. Epanechnikov Kernel Density Function  
Unconditional medical expenditure as a proportion of per capita household expenditure

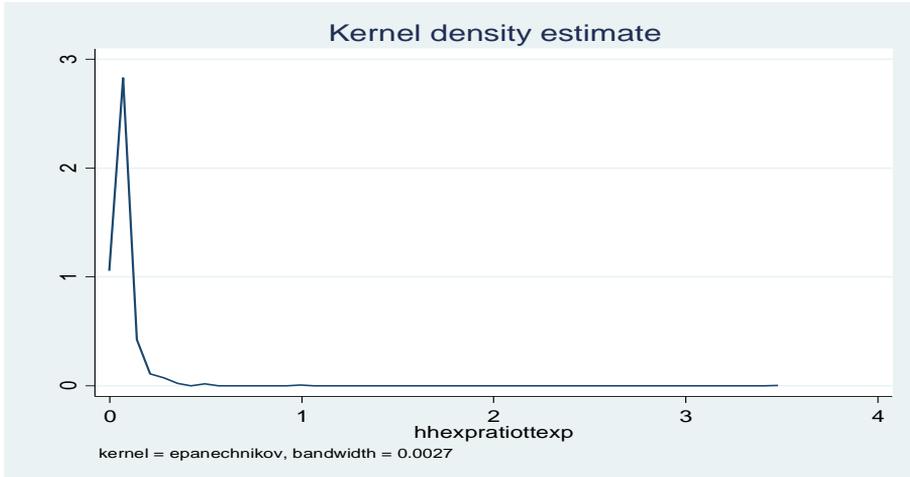


Figure 2. Epanechnikov Kernel Density Function  
Log of conditional medical expenditure as a proportion of per capita household expenditure

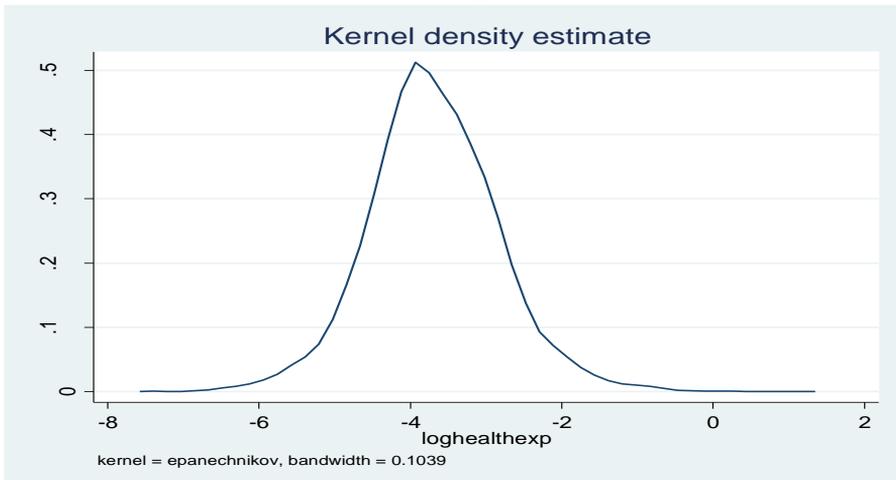


Table 1. Health seeking behaviour within households, across Pakistan

Age groups	Less than 15	16-25	26-40	41-60	Above 60	Total
Male	23934	11479	9470	7799	2807	55,489
Female	22117	11014	10219	7752	2342	53,444
Difference	1817	465	-749	47	465	2,045
Reported sick in last two weeks						9,395
Male	2060	478	364	732	584	4,218
Female	1853	612	826	1232	654	5177
	3.34***	-4.07***	-13.43***	-11.33***	-2.00**	-10.11***
Consulted medical practitioner in last two weeks, conditional on reporting sick						8,942
Male	1999	462	344	688	538	4031
Female	1782	576	785	1170	598	4911
Difference	3.56***	-3.55***	-13.16***	-11.23***	-1.78**	-9.50***

Note: \*, \*\* and \*\*\* signify statistically significant gender differences at the 15%, 10%, 5%, and 1% levels respectively. The first row gives gender breakdown within households. Secondly, it gives information about males and females within households who have fallen sick in last two weeks. Lastly, it provides information about individuals who have visited medical practitioners given they have reported sick.

Table 2. Summary statistics of Household level variables

HH Variables	Total	Urban	Rural	Poor	Non-poor	Punjab	Sindh	KPK	Baluchistan
Sample size	16,341	6,589	9,752	9,809	6,532	6954	4098	2954	2335
Average Household size	6.66	6.53	6.75	5.8	7.9	6.174	6.65	7.32	7.32
Male headed households (%)	91.79	40.46	59.44	91	93	41.13	26.57	16.89	15.41
Household head education	5.11	6.98	3.84	3.6	7.4	5.29	5.6	4.69	4.22
Dependency ratio	0.43	0.45	0.39	0.46	0.4	0.41	0.42	0.44	0.47
Health expenditure (In Rupees)	6466	6821	6225	4,357	9,526	6732	4868	10415	3520
Health expenditure ratio of total Household Expenditure	0.03	0.03	0.04	0.04	0.03	0.04	0.02	0.05	0.01
Average income (In Rupees)	214,990	268,551	178,817	117,923	360,710	227,734	190,232	229,259	202,437
Average per capita expenditure (In Rupees)	31,342	40,606	25,086	23,050	43,779	33,405	31,303	29,188	27996
Proportion of HH Electricity as source of lighting	90.45	97.78	85.50	87.47	94.93	95.00	89.24	93.74	74.90
Proportion of HH having access to toilets	67.51	72.82	63.92	64.04	72.70	80.01	46.78	79.08	51.99

Table 3. Household level results of overall Pakistan:

VARIABLES	OLS		Hurdle Model		
	Unconditional Exp	Probit Sick	Probit Consulted	Probit Incur pos Exp	OLS Conditional Exp
	(1)	(2)	(3)	(4)	(5)
	HEALTH_SHARE	REPORTED_SICK	CONSULTED	POSITIVE HEALTH EXP	LOG OF HEALTH_SHARE
Log Expenditure per capita	-0.00576*** (0.000993)	-0.0113 (0.00885)	0.0166*** (0.00426)	0.00198** (0.000779)	-0.227*** (0.0239)
Gender of the Household (Male=1)	0.00160 (0.00195)	0.0479*** (0.0172)	8.04e-05 (0.0110)	-0.00127 (0.000774)	0.161*** (0.0458)
Log of Household size	-0.00836*** (0.00116)	0.206*** (0.0106)	0.0189*** (0.00624)	0.000363 (0.000994)	-0.248*** (0.0262)
Household head Education	-0.000211** (9.40e-05)	-0.00223*** (0.000839)	0.000656 (0.000481)	-5.82e-05 (6.98e-05)	-0.00579*** (0.00207)
Dependency ratio	0.0379*** (0.00822)	0.0918 (0.0741)	0.0139 (0.0367)	0.000429 (0.00636)	0.464** (0.188)
Sindh	-0.00968***	0.151***	-0.00135	0.00184**	-0.325***

	(0.00117)	(0.0105)	(0.00613)	(0.000908)	(0.0250)
KPK	0.0159***	0.111***	-0.00763	-0.000903	0.367***
	(0.00124)	(0.0112)	(0.00695)	(0.00119)	(0.0264)
Balochistan	-0.0192***	-0.0428***	-0.0522***	-0.000919	-0.449***
	(0.00144)	(0.0128)	(0.0129)	(0.00167)	(0.0349)
Region (Urban=1)	-0.00650***	-0.00829	-0.00234	-0.000999	-0.146***
	(0.000978)	(0.00874)	(0.00508)	(0.000937)	(0.0215)
Electricity installed	-0.000557	-0.00368	0.00721	0.00127	-0.0283
	(0.00158)	(0.0142)	(0.00830)	(0.00181)	(0.0351)
Flushing toilet	-0.00117	0.0300***	0.00149	-0.000255	-0.132***
	(0.000999)	(0.00887)	(0.00502)	(0.000798)	(0.0218)

Prop Females less than 15	0.000708	-0.0105	-0.00969	0.00328	0.0136
	(0.00354)	(0.0317)	(0.0186)	(0.00297)	(0.0779)
Prop Males 16 till 25	0.0336***	-0.0299	-0.00876	0.000279	0.421**
	(0.00912)	(0.0823)	(0.0419)	(0.00718)	(0.209)
Prop Females 16 till 25	0.0400***	0.103	-0.00864	0.00785	0.559***
	(0.00925)	(0.0834)	(0.0429)	(0.00776)	(0.211)
Prop Males 26 till 40	0.0399***	0.126	0.0302	-7.45e-05	0.555**
	(0.00953)	(0.0863)	(0.0456)	(0.00750)	(0.219)
Prop Females 26 till 40	0.0479***	0.0544	-0.0439	0.00473	0.650***
	(0.0100)	(0.0908)	(0.0471)	(0.00870)	(0.230)
Prop Males 41 till 60	0.0493***	0.0214	-0.0626	-0.00158	0.172
	(0.00979)	(0.0897)	(0.0464)	(0.00764)	(0.233)
Prop Females 41 till 60	0.0491***	0.261***	-0.0241	0.00533	1.173***
	(0.00979)	(0.0890)	(0.0449)	(0.00845)	(0.226)
Prop Males greater than 60	0.0378***	0.231***	-0.0738**	-0.000297	0.340**
	(0.00670)	(0.0606)	(0.0315)	(0.00484)	(0.159)
Prop Females greater than 60	0.0385***	0.399***	0.00682	0.00114	0.846***
	(0.00613)	(0.0551)	(0.0313)	(0.00461)	(0.148)
Constant	0.0739***				-1.210***

	(0.0136)				(0.319)
Observations	16,341	16,341	6,673	6,404	6,385
R-squared	0.059	0.0469	0.0405	0.1614	0.179
	P-values				
Age 16 till 25	0.2165	0.0044	0.9964	0.1388	0.251
Age 26 till 40	0.2641	0.2823	0.0601	0.4833	0.589
Age 41 till 60	0.9801	0.0014	0.314	0.318	0
Age 60 and above	0.9334	0.0454	0.072	0.839	0.0295

Note: Standard errors in parentheses. \*significant at 10%, \*\*significant at 5%, \*\*\* significant at 1% level. Marginal effects and pseudo R-squared reported for probit equations. Base category for region is ‘Rural’, for provincial dummies is ‘Punjab’ and for age-sex cohorts is ‘proportion of males aged less than 15’.

Table 4. Urban Household Level Analysis, Pakistan

VARIABLES	OLS		Hurdle Model		
	Unconditional Exp	Probit Sick	Probit Consulted	Probit Incur pos Exp	OLS Conditional Exp
	(1)	(2)	(3)	(4)	(5)
	HEALTH_ SHARE	REPORTED_ SICK	CONSULTED	POSITIVE HEALTH EXP	LOG OF HEALTH_ SHARE
Log Expenditure per capita	-0.00616*** (0.00131)	-0.0116 (0.0121)	0.0112** (0.00525)	0.000162 (0.0700)	-0.224*** (0.0367)
Gender of the Household (Male=1)	0.00419* (0.00250)	0.00736 (0.0276)	-0.00465 (0.0154)	-7.63e-05 (0.0340)	0.296*** (0.0725)
Log of Household size	-0.00650*** (0.00151)	0.244*** (0.0169)	0.0120 (0.00982)	-0.000121 (0.0522)	-0.253*** (0.0433)
Household head Education	-0.000127 (0.000119)	-0.00124 (0.00124)	0.000434 (0.000676)	1.16e-06 (0.000501)	-0.00696** (0.00323)
Dependency ratio	0.0195* (0.0102)	0.0222 (0.112)	-0.00879 (0.0517)	-0.0179 (4.795)	0.159 (0.274)
Sindh	-0.00948*** (0.00142)	0.143*** (0.0158)	-0.0126 (0.00962)	7.26e-05 (0.0316)	-0.339*** (0.0400)
KPK	0.0133***	0.117***	0.00845	-0.000193	0.401***

	(0.00166)	(0.0185)	(0.00953)	(0.0802)	(0.0444)
Balochistan	-0.0137***	0.0197	-0.0357**	-0.000133	-0.323***
	(0.00187)	(0.0207)	(0.0174)	(0.0559)	(0.0543)
Electricity installed	0.00461	0.0391	0.0407	0.00215	0.177
	(0.00382)	(0.0415)	(0.0370)	(0.770)	(0.119)
Flushing toilet	-0.00317**	-0.0237	-0.0159**	-2.39e-06	-0.173***
	(0.00135)	(0.0147)	(0.00700)	(0.00104)	(0.0369)
Prop females less than 15	0.00327	0.0170	0.0380	0.000331	0.190
	(0.00466)	(0.0508)	(0.0281)	(0.143)	(0.129)
Prop Males 16 till 25	0.0175	-0.132	0.00759	-0.0178	0.333
	(0.0113)	(0.124)	(0.0598)	(4.775)	(0.310)
Prop Females 16 till 25	0.0153	-0.0156	0.0213	-0.0173	0.410
	(0.0115)	(0.126)	(0.0618)	(4.533)	(0.312)
Prop Males 26 till 40	0.0174	0.0265	0.0463	-0.0182	0.306
	(0.0118)	(0.129)	(0.0649)	(4.944)	(0.320)
Prop Females 26 till 40	0.0215*	-0.00685	-0.00737	-0.0172	0.330
	(0.0126)	(0.139)	(0.0694)	(4.507)	(0.344)
Prop Males 41 till 60	0.0116	-0.0350	0.000404	-0.0180	-0.153

	(0.0122)	(0.136)	(0.0691)	(4.875)	(0.347)
Prop Females 41 till 60	0.0561***	0.255*	-0.0117	-0.0176	1.338***
	(0.0125)	(0.138)	(0.0652)	(4.667)	(0.342)
Prop Males greater than 60	0.0132	0.314***	-0.0266	-0.000399	0.160
	(0.00886)	(0.0979)	(0.0507)	(0.173)	(0.256)
Prop Females greater than 60	0.0382***	0.368***	0.000608	-0.000682	1.282***
	(0.00824)	(0.0904)	(0.0494)	(0.295)	(0.262)
Constant	0.0812***				-1.509***
	(0.0181)				(0.498)
Observations	6,585	6,589	2,603	2,507	2,498
R-squared	0.051				0.162
	P-values				
Age 16 till 25	0.7149	0.0884	0.7328	0.4353	0.6758
Age 26 till 40	0.6342	0.7404	0.3861	0.3125	0.93
Age 41 till 60	0	0.0155	0.8528	0.6845	0
Age 60 and above	0.0405	0.6911	0.7096	0.8105	0.0033

Note: Standard errors in parentheses. \*significant at 10%, \*\*significant at 5%, \*\*\* significant at 1% level. Marginal effects are reported for probit equations. Base category for provincial dummies 'Punjab' and for age-sex cohorts is 'proportion of males aged less than 15'.

Table 5. Rural Household Level Analysis

VARIABLES	OLS		Hurdle Model		
	Unconditional Exp	Probit Sick	Probit Consulted	Probit Incur pos Exp	OLS Conditional Exp
	(1)	(2)	(3)	(4)	(5)
	HEALTH_SHARE	REPORTED_SICK	CONSULTED	POSITIVE HEALTH EXP	LOG OF HEALTH_SHARE
Log Expenditure per capita	-0.00626*** (0.00165)	0.00667 (0.0134)	0.0292*** (0.00734)	0.000135 (0.0447)	-0.204*** (0.0324)
Gender of the Household (Male=1)	-0.000613 (0.00284)	0.0718*** (0.0222)	0.00250 (0.0143)		0.0698 (0.0596)
Log of Household size	-0.00949*** (0.00169)	0.188*** (0.0138)	0.0225*** (0.00781)	8.18e-06 (0.00271)	-0.229*** (0.0333)
Household head Education	-0.000192 (0.000141)	-0.00258** (0.00114)	0.00111* (0.000664)	-7.79e-06 (0.00258)	-0.00463* (0.00272)
Dependency ratio	0.0507*** (0.0122)	0.138 (0.0999)	0.0195 (0.0494)	0.0171 (4.143)	0.913*** (0.270)
Sindh	-0.00998*** (0.00176)	0.159*** (0.0142)	0.00840 (0.00738)		-0.324*** (0.0321)
KPK	0.0176***	0.104***	-0.0176*		0.343***

	(0.00175)	(0.0143)	(0.00922)		(0.0329)
Balochistan	-0.0227***	-0.0877***	-0.0657***		-0.557***
	(0.00210)	(0.0165)	(0.0189)		(0.0458)
Electricity installed	-0.00235	-0.0231	0.00145	3.60e-05	-0.0716*
	(0.00192)	(0.0157)	(0.00810)	(0.0118)	(0.0370)
Flushing toilet	4.43e-05	0.0630***	0.0154**	-6.69e-05	-0.109***
	(0.00141)	(0.0113)	(0.00679)	(0.0223)	(0.0272)
Prop females less than 15	-0.000639	-0.0244	-0.0373	0.000185	-0.0815
	(0.00503)	(0.0407)	(0.0233)	(0.0613)	(0.0976)
Prop Males 16 till 25	0.0443***	0.0307	-0.0293	0.0170	0.724**
	(0.0136)	(0.111)	(0.0556)	(4.114)	(0.296)
Prop Females 16 till 25	0.0578***	0.171	-0.0343	0.0176	0.931***
	(0.0137)	(0.112)	(0.0566)	(4.308)	(0.300)
Prop Males 26 till 40	0.0577***	0.195*	0.0130	0.0171	1.030***
	(0.0142)	(0.117)	(0.0608)	(4.142)	(0.313)
Prop Females 26 till 40	0.0683***	0.0843	-0.0763	0.0172	1.129***
	(0.0147)	(0.121)	(0.0612)	(4.190)	(0.324)
Prop Males 41 till 60	0.0769***	0.0615	-0.0942	0.0168	0.674**
	(0.0145)	(0.120)	(0.0607)	(4.050)	(0.327)

Prop Females 41 till 60	0.0475*** (0.0142)	0.263** (0.117)	-0.0485 (0.0584)	0.0174 (4.260)	1.338*** (0.314)
Prop Males greater than 60	0.0543*** (0.00951)	0.181** (0.0777)	-0.0878** (0.0388)	0.0165 (3.963)	0.539*** (0.203)
Prop Females greater than 60	0.0401*** (0.00862)	0.402*** (0.0699)	0.00193 (0.0393)		0.598*** (0.179)
Constant	0.0697*** (0.0214)				-1.752*** (0.437)
Observations	9,752	9,752	4,070	3,159	3,887
R-squared	0.059				0.163
P-values					
Age 16 till 25	0.7149	0.0884	0.7328	0.4353	0.6758
Age 26 till 40	0.6342	0.7404	0.3861	0.3125	0.93
Age 41 till 60	0	0.0155	0.8528	0.6845	0
Age 60 and above	0.0405	0.6911	0.7096	0.8105	0.0033

Note: Standard errors in parentheses. \*significant at 10%, \*\*significant at 5%, \*\*\* significant at 1% level. Marginal effects and pseudo R-squared reported for probit equations. Base category, for provincial dummies 'Punjab' and for age-sex cohorts is 'proportion of males aged less than 15'.

Table 6. Poor Household Level Analysis, Pakistan

VARIABLES	OLS		Hurdle		
	Unconditional Exp	Probit Sick	Probit Consulted	Incur pos Exp	Conditional Exp
	(1)	(2)	(3)	(4)	(5)
	HEALTH_ SHARE	REPORTED_SICK	CONSULTED	POSITIVE HEALTH EXP	LOG OF HEALTH_ SHARE
Log Expenditure per capita	-0.0212*** (0.00198)	-0.0166 (0.0133)	0.0234*** (0.00575)	8.76e-05 (0.000154)	-0.278*** (0.0410)
Gender of the Household (Male=1)	0.000541 (0.00275)	0.0656*** (0.0218)	-0.00795 (0.0133)	-4.39e-05 (8.42e-05)	0.160*** (0.0592)
Log of Household size	-0.0199*** (0.00206)	0.204*** (0.0166)	0.00914 (0.00977)	1.52e-05 (6.43e-05)	-0.323*** (0.0425)
Household head Education	4.73e-06 (0.000145)	-0.000433 (0.00118)	0.00211*** (0.000767)	-1.02e-06 (4.54e-06)	-0.00704** (0.00286)
Dependency ratio	0.0339*** (0.0107)	0.0860 (0.0882)	0.0455 (0.0465)	-0.00881 (0.0162)	0.426* (0.222)
Sindh	-0.00804*** (0.00161)	0.133*** (0.0133)	0.00662 (0.00774)	0.000248 (0.000161)	-0.293*** (0.0307)
KPK	0.0175***	0.0817***	-0.00489	-3.15e-05	0.343***

	(0.00181)	(0.0150)	(0.00923)	(8.56e-05)	(0.0348)
Balochistan	-0.0168***	-0.122***	-0.0818***	-0.000183	-0.450***
	(0.00212)	(0.0161)	(0.0216)	(0.000386)	(0.0510)
Electricity installed	-0.00141	-0.0231	0.00134	2.10e-05	-0.0601
	(0.00196)	(0.0163)	(0.00922)	(8.09e-05)	(0.0391)
Flushing toilet	-0.00105	0.0177	0.00146	-2.91e-05	-0.106***
	(0.00136)	(0.0111)	(0.00671)	(6.51e-05)	(0.0269)
Prop females less than 15	0.000663	0.0310	-0.0327	0.000224	0.0105
	(0.00468)	(0.0383)	(0.0240)	(0.000414)	(0.0923)
Prop Males 16 till 25	0.0364***	-0.00316	0.0467	-0.00884	0.497**
	(0.0121)	(0.0999)	(0.0551)	(0.0163)	(0.251)
Prop Females 16 till 25	0.0358***	0.117	-0.0358	-0.00861	0.413
	(0.0122)	(0.101)	(0.0550)	(0.0159)	(0.252)
Prop Males 26 till 40	0.0363***	0.143	0.0693	-0.00879	0.578**
	(0.0129)	(0.107)	(0.0615)	(0.0162)	(0.269)
Prop Females 26 till 40	0.0511***	0.0750	-0.0642	-0.00870	0.567**
	(0.0131)	(0.109)	(0.0605)	(0.0160)	(0.276)
Prop Males 41 till 60	0.0536***	0.0449	-0.0576	-0.00888	0.215
	(0.0129)	(0.109)	(0.0605)	(0.0164)	(0.282)

Prop Females 41 till 60	0.0425*** (0.0127)	0.320*** (0.105)	-0.0315 (0.0566)	-0.00855 (0.0158)	1.040*** (0.266)
Prop Males greater than 60	0.0326*** (0.00881)	0.294*** (0.0727)	-0.0905** (0.0414)	-7.36e-06 (0.000239)	0.147 (0.188)
Prop Females greater than 60	0.0379*** (0.00784)	0.345*** (0.0647)	-0.000473 (0.0410)	-3.75e-05 (0.000210)	0.782*** (0.172)
Constant	0.247*** (0.0242)				-0.573 (0.505)
Observations	9,805	9,809	3,912	3,728	3,716
R-squared	0.059				0.145
P-values					
Age 16 till 25	0.9424	0.05	0.034	0.3674	0.5963
Age 26 till 40	0.1374	0.42	0.0126	0.7944	0.9599
Age 41 till 60	0.2731	0.0019	0.5897	0.3404	0.0009
Age 60 and above	0.6459	0.6015	0.1145	0.9251	0.0191

Note: Standard errors in parentheses. \*significant at 10%, \*\*significant at 5%, \*\*\* significant at 1% level. Marginal effects and pseudo R-squared reported for probit equations. Base category for region is 'Rural' for provincial dummies 'Punjab' and for age-sex cohorts is 'proportion of males aged less than 15'.

Table 7. Non-Poor Household Level Analysis

VARIABLES	OLS		Hurdle		
	Unconditional Exp	Probit Sick	Probit Consulted	Probit Incur pos Exp	Conditional Exp
	(1)	(2)	(3)	(4)	(5)
	HEALTH_SHARE	REPORTED_SICK	CONSULTED	POSITIVE HEALTH EXP	LOG OF HEALTH_SHARE
Log Expenditure per capita	-0.00153 (0.00154)	0.0437*** (0.0164)	0.00708 (0.00826)	0.00172 (0.00150)	-0.303*** (0.0415)
Gender of the Household (Male=1)	0.00496* (0.00270)	0.0213 (0.0286)	0.00558 (0.0164)		0.172** (0.0739)
Log of Household size	-0.00406** (0.00192)	0.249*** (0.0206)	0.0222** (0.0103)	0.000107 (0.00148)	-0.264*** (0.0513)
Household head Education	-0.000593*** (0.000118)	-0.00403*** (0.00124)	-0.000160 (0.000589)	-7.71e-05 (8.65e-05)	-0.00659** (0.00308)
Dependency ratio	0.0456*** (0.0129)	0.0964 (0.140)	-0.0412 (0.0607)	0.0169 (0.0120)	0.677* (0.347)
Sindh	-0.0105*** (0.00166)	0.167*** (0.0176)	-0.0160 (0.0106)	0.000702 (0.00106)	-0.378*** (0.0437)
KPK	0.0158*** (0.00161)	0.158*** (0.0171)	-0.0137 (0.0102)	-0.000668 (0.00148)	0.399*** (0.0411)

Balochistan	-0.0197***	0.0645***	-0.0300**	0.000429	-0.448***
	(0.00188)	(0.0201)	(0.0151)	(0.00107)	(0.0504)
Electricity installed	-0.000471	0.0151	0.0106	0.00115	-0.0517
	(0.00277)	(0.0287)	(0.0156)	(0.00285)	(0.0742)
Flushing toilet	-0.00242*	0.0464***	0.00205	0.000279	-0.175***
	(0.00143)	(0.0148)	(0.00722)	(0.00116)	(0.0374)
Prop females less than 15	0.000533	-0.0897	0.0332	0.000959	-0.0149
	(0.00537)	(0.0567)	(0.0281)	(0.00384)	(0.142)
Prop Males 16 till 25	0.0293**	-0.0674	-0.0809	0.0187	0.414
	(0.0140)	(0.151)	(0.0660)	(0.0130)	(0.378)
Prop Females 16 till 25	0.0433***	0.0873	0.00388	0.0259*	0.814**
	(0.0143)	(0.154)	(0.0686)	(0.0139)	(0.384)
Prop Males 26 till 40	0.0386***	0.0859	-0.0340	0.0145	0.546
	(0.0145)	(0.156)	(0.0693)	(0.0128)	(0.389)
Prop Females 26 till 40	0.0340**	0.00896	-0.0384	0.0219	0.752*
	(0.0155)	(0.168)	(0.0748)	(0.0143)	(0.417)
Prop Males 41 till 60	0.0315**	-0.0417	-0.0540	0.0156	0.166
	(0.0152)	(0.165)	(0.0733)	(0.0137)	(0.422)
Prop Females 41 till 60	0.0579***	0.129	-0.0359	0.0194	1.572***

	(0.0158)	(0.171)	(0.0763)	(0.0141)	(0.425)
Prop Males greater than 60	0.0368***	0.0492	-0.0410	0.0107	0.756**
	(0.0108)	(0.117)	(0.0507)	(0.0132)	(0.307)
Prop Females greater than 60	0.0276**	0.626***	-0.00758	0.0165	1.049***
	(0.0108)	(0.113)	(0.0499)	(0.0134)	(0.286)
Constant	0.0195				-0.567
	(0.0225)				(0.600)
Observations	6,532	6,532	2,761	2,676	2,669
R-squared	0.069				0.186
	P-values				
Age 16 till 25	0.036	0.0304	0.0172	0.3054	0.037
Age 26 till 40	0.6554	0.4878	0.9373	0.4164	0.4881
Age 41 till 60	0.0373	0.2301	0.7734	0.7255	0.0001
Age 60 and above	0.5629	0.0007	0.6549	0.7231	0.5038

Note: Standard errors in parentheses. \*significant at 10%, \*\*significant at 5%, \*\*\* significant at 1% level. Marginal effects and pseudo R-squared reported for probit equations. Base category, for provincial dummies ‘Punjab’ and for age-sex cohorts is ‘proportion of males aged less than 15.

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## Relationship among Globalization, Terrorism, and Economic Growth in Pakistan

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### Abstract

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*The current study investigates the interconnection of globalization, terrorism, and economic growth in Pakistan over the period of 1972 to 2019. ARDL co-integration bound test is used to establish the relationship among these variables. Limited empirical evidence is available on terrorism and globalization, particularly with reference to Pakistan. The empirical evidence confirms the long-run association among globalization, terrorism, and economic growth. Growth in per capita GDP increases terrorism because higher economic growth is not evenly distributed in Pakistan, while globalization reduces terrorist activities. Globalization, particularly political integration with rest of the world provides technical and financial assistance to overcome terrorism in Pakistan. Moreover, there is unidirectional causality from GDP growth to terrorism and bidirectional causality between globalization and terrorism. However, no evidence of causality is found between globalization and economic growth. This indicates that Pakistan is unable to get economic benefit from globalization because of its internal structural issues.*

**Keywords:** Economic Growth, Globalization, Terrorism,

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## 1. INTRODUCTION

Globalization is a complicated phenomenon and may be translated in different ways. It is the international interaction, interdependence, and integration of domestic economies across world. The movement and exchange have speeded up due to deepening and widening of global interconnectedness. The newly formed global system of mutual interdependence has created a flat world. Globalization is thought to be an imperative feature which can affect the economies of the countries. Nevertheless, its influence on economic growth is considered to be one of the most debatable issues. Some studies indicate promising effects of globalization on economic growth (Dollar, 1992; Dreher, 2006; Sapkota, 2011; Dogan, 2013; Lee, 2014; Hasan, 2019), whereas others argue weak and adverse effects (Rodriguez & Rodrik, 2000 and Umaru *et al.*, 2013).

Globalization provides opportunities for economic development and at the same time it imposes challenges within the domestic economics. Its impact is not uniform in all the regions of the world. Some countries or groups have benefitted significantly from economic integration in the form of higher growth, lower unemployment, poverty, and income inequality (Bhalla, 2002; Nissanke & Throbecke, 2006; Sapkota, 2011; Dogan 2013 and Lee, 2014), while others show adverse impact on these variables (Bourguignon & Morrisson, 2002 and Bensidoun *et al.*, 2011). Generally, if the benefits of liberalization policies are concentrated and not evenly distributed among mass population, certain groups may oppose economic, political, and social systems linked with globalization. Occasionally, these opponent groups can create an instable environment to attain their objectives. Hence, globalization can be viewed as a cause of clash in the form of terrorist attacks (Wilkinson, 2005). This, in turn, weakens a government's capability to attain its socio-economic and political goals.

The current wave of globalization has declined the importance of nation state due to a higher degree of interdependence of domestic economics in the economic, social, and political structures of global system. According to the finding of Li and Schaub (2004), highly integrated economies tend to become more vulnerable to terrorist attacks. Growing flow of international trade through various modes of transportation can increase the likelihood of a terrorist to smuggle people, banned material, or weapons undetected among or between the borders in question. On the contrary, a few researchers argue that economic liberalization decreases the terrorist attacks. They believe that globalization soars economic development that sequentially reduce the number

of terrorist attacks. Some form of international integration with the global system is linked with lower number of terrorist activities (Li & Schaub, 2004). However, this argument is not well established and needs systematic empirical investigation. Terrorism can be defined as use of violence and unlawful force by non-state agents to attain economic, social, political, or religious aims through intimidation and fear. Terrorism creates severe problems in determining the economic growth of the economy. Both the developed and developing economies incur huge costs of terrorism in terms of loss of human life, damage to infrastructure and other valuable assets. Moreover, it is found that terrorism and violence have an adverse effect on future consumption because individuals prefer to consume in the current time period so they replace their savings for current consumption. Therefore, it reduces the process of capital accumulation and economic development (Shahbaz *et al.*, 2013). Several studies mentioned poverty, unemployment, trade in addition to other economic factors as the main causes of terrorism (Bukhari & Masih, 2016). There are different sources of terrorism including social, economic, political, religious, demographic, geographical, and psychological factors (Ismail & Amjad, 2014). Government organizations, religious bodies, police, military, transport, media, and airport are among the most targeted areas. Terrorists use various types of strategies i.e., suicide attacks, bomb blasts, armed attacks, kidnapping, and hijacking to achieve their goals. All forms of terrorist activities badly affect the physical capital and human capital stock of a country (Abadie & Gardeazabal, 2008 and Khan *et al.*, 2016). It increases the counter-terrorism expenditure and uncertainty about future.

Literature indicates various studies that show negative interconnection between growth and terrorism. For example, Afonso-Rodríguez (2017) demonstrated an inverse association between the two variables in Turkey. Similarly, Fareed *et al.* (2018) also elucidated a negative interrelation between the same variables in case of Thailand. Furthermore, Zakaria *et al.* (2019), Saleem *et al.* (2020) and Korotayev *et al.* (2020) also explained a negative connection between terrorism and economic growth. On the other hand, literature has yet to come up with empirical findings on globalization-terrorism nexus. However, few studies describe the relationship between these two variables but the results are inconclusive. For instance, according to Asongu and Biekpe (2018), globalization is giving rise to terrorism in African region whereas Bajaj and Rao (2018) could not prove a direct correlation between globalization and terrorism. While, Rajput *et al.* (2021) found that economic globalization is helping to decrease terrorism activities but social and political

globalization is nurturing the terrorism activities, even though the said result is not significant.

Limited literature on terrorism, economic growth, and globalization motivated the researchers to examine the relationship among the said indicators. It is essential to highlight that the interconnection among these variables is not clear in Pakistan's case. Pakistan is facing the challenge of terrorism for several years and at the same time the pace of globalization has drastically increased. Hence, the question of how the global economic and political networks are associated with terrorism and how it can influence terrorist activities in Pakistan is a major concern of policy makers. Furthermore, another important issue is how the forces of globalization and terrorism is affecting economic growth of Pakistan. Therefore, it is critical to establish the relationship among these variables so that policies can be designed regarding the direction and nature of association among terrorism, globalization, and economic development. In this respect, the present study is providing profound insights in various ways to the existing strand of literature in case of developing economies. The first goal of the present study is to inspect and determine the direction of association among globalization, terrorism, and economic growth in Pakistan. Second, this study develops a comprehensive index of terrorism by incorporating three major indicators: number of incidents, fatalities, and injuries. Third, the study will add to the smaller pool of the prior literature focused on globalization and terrorism nexus in Pakistan by using the latest available data. Finally, the present empirical analysis will provide suitable policy suggestions not only for Pakistan but also for other developing economies.

## **2. LITERATURE REVIEW**

Existing literature is distributed into three parts to understand the relationship among the selected variables. Part one of this section deals with the studies that establish a connection between globalization and economic growth. Part two of the literature review present the studies dealing with terrorism and economic growth. Finally, the relationship of globalization and terrorism is provided in the last part of this section.

### **2.1. Globalization and Economic Growth**

Available literature regarding the connection between globalization and economic growth discloses inconclusive and contradictory outcomes. Some studies show favourable effect of globalization on economic progress

(Dreher, 2006; Georgiou, 2011; Hasan, 2019), while others show weak or even negative effects. Therefore, the literature is further forked into two categories on the basis of empirical and theoretical findings. The first category deals with the studies that provide evidence to support globalization for fostering economic growth. In this regard, the studies of Dollar (1992), Greenway *et al.* (1999) and Brunner (2003) showed that trade liberalization is positively related to economic growth.

Later, Dreher (2006) used a broad index of globalization, Konjunkturforschungsstelle (KOF), to determine the association among globalization and economic growth. The results show promising outcome of globalization on economic growth. Similarly, the studies of Afzal (2007); Shaik and Shah (2008); Rao and Vadlamannatio (2011); Mutascu and Fleisher (2011); Leitao (2012) and Meraj (2013) also found positive connotations between economic growth and globalization. In the same perspective, Latif *et al.* (2018) postulated the globalization – growth nexus for BRICS block and postulated a favourable association between these two variables. Santiago *et al.* (2020) took the sample of Latin America and Caribbean countries and elucidated a positive connection between globalization and economic growth. For OECD economies, Kurniawati (2020) also postulated a positive association between the variables of discussion.

The second group of literature comprises of studies that reject the favourable effect of globalization on economic growth. In this respect, Rodriguez and Rodrik (2000) negated the findings of Dollar (1992) and others and highlighted that these studies used incomprehensive and inappropriate measure of trade openness. Likewise, the study of Umaru *et al.* (2013) also presented the harmful result of globalization on petroleum, solid mineral, and manufacturing sectors of Nigerian economy. Ghosh (2017) also supported the unfavourable interrelation between the said variables. However, Titalessy (2018) inferred a mix evidence for selected Asian Pacific economies. The study interpreted that economic and political globalization exerts a positive effect on growth process while the social globalization exerts a detrimental effect on growth. In a comparatively recent study, Acheampong *et al.* (2021) illustrated the asymmetric interconnection between globalization and growth for the case of 23 developing economies.

## **2.2. Globalization and Terrorism**

Pakistan's economy has been suffering from internal and external shocks throughout the history but the effects of these shocks have increased

after 9/11. Unstable economic factors such as high inflation, fiscal deficit, lack of human and physical capital, political instability, high foreign debt, low exchange rate, natural disasters, and unfavourable law and order adversely affect the economic growth of Pakistan (Ali & Rehman, 2015).

Little systematic empirical evidence is available on the association between globalization and terrorism. Although studies are available on how terrorism affects international integration (Murphy, 2002; Blomberg & Hess, 2005; Khan & Estrada, 2016) but such studies came up with limited empirical signs on how globalization affects terrorism.

Cronin *et al.* (2006) provided a theoretical framework on the association between globalization and international terrorism. According to this study, pragmatic approach regarding global networks of intelligence sharing and law enforcement can halt terrorism. The study of Li and Schaub (2004) examined the impact of economic globalization on transnational terrorism. The results reveal that foreign direct investment (FDI), management of portfolio investment and trade have no direct influence on terrorist activities inside the borders for the dataset of 112 countries over the period of 1975 to 1997. However, globalization has an indirect adverse effect on transnational terrorism. In contrast, Lutz and Lutz (2015) show that globalization is positively associated with terrorism in Middle East. Asongu and Biekpe (2018) examined the same nexus for African economies and inferred that globalization is positively connected with terrorism. Bajaj and Rao, (2020) could not find a direct interconnection between these two variables. Naseer *et al.* (2021) discussed the case study of a developing economy and elucidated that globalization is one of the leading factors of terrorism. Rajput *et al.* (2021) also illustrated the globalization- terrorism nexus for 195 economies. The empirical analysis revealed that economic globalization exerts a negative influence of terrorism; however, the study could not find the significant correlation between political and social globalization and terrorism.

### **2.3. Terrorism and Economic growth**

This section describes the existing literature on terrorism and economic growth. Terrorism influences the equilibrium decision of international investors in an integrated world economy. It hurts the economy through open-economy channel. The terrorist risk shifts the capital across other countries, which reduces the net foreign investment (Abadie & Gardeazabal, 2008).

Shahzad *et al.* (2013) analyzed the casual association between terrorism and economic growth by including the variable of trade liberalization and capital in conventional production function in Pakistan. The results

illustrate bidirectional causality among trade liberalization, terrorism and capital, whereas unidirectional causality is found from terrorism to economic growth. Later on, Shahzad *et al.* (2016) carried out a study on foreign direct investment complimented with terrorism's impact on economic growth. It inferred analogy among FDI, terrorism, and economic growth in the long term and also came up with the findings that there is two-way causality between FDI and economic growth. Ismail and Amjad (2014) also shows a long-run association between terrorism and macroeconomic indicators. Findings of this study indicate one-way causality from per capita GDP, GDP growth, unemployment to terrorism, and two-way causality between inflation and terrorism.

Hyder *et al.* (2015), Khan *et al.* (2016) and Khan and Estrada (2015) show negative influence of terrorism on economic growth. However, Caruso and Schneider (2011) validate the favourable relationship between terrorism and per capita GDP in Western Europe. Bukhari and Masih (2016) indicated a strong tie between GDP growth and terrorism in the long run in Pakistan. Rising per capita income is related with higher income inequality; therefore, it contributes to terrorism. In contrast, Malik and Zaman (2013) show that unemployment, trade openness, and income inequality have no long-run association with terrorism in Pakistan. Afonso-Rodríguez also illustrated an inverse impact of terrorism on growth in Turkish economy. Çınar (2017) confirmed a negative connectedness between terrorism and growth for 122 developing economies. Fareed *et al.* (2018) discussed a case study of Thailand and revealed that terrorism is showing a harmful impact on growth. Zakaria *et al.* (2019) explored the same nexus for Pakistani economy and highlighted that terrorism diminishes economic growth. On the same lines, for Pakistani economy, Saleem *et al.* (2020) illustrated the same nexus and inferred the inverse connotation between these two variables. Korotayev *et al.* (2020) also confabulated the terrorism-growth nexus and concluded that terrorism exerts an unfavourable influence on growth in a group of developing economies.

The relationship among globalization, terrorism, and economic growth is complex in a way, that globalization increases economic growth and in turn higher growth rate and global networks are helpful in reducing terrorism, while its adverse effect on economic growth and transnational terrorist activities cannot be ignored. Economic and socio-political liberalization under the umbrella of globalization increases the coincidental of terrorism.

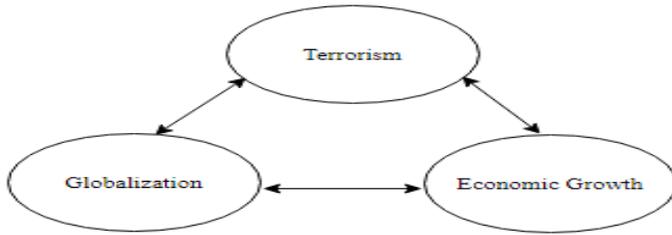
### 3. THEORETICAL FRAMEWORK

It is observed in literature that direct or indirect link can be established among globalization, economic growth, and terrorism. Various studies show that these variables may affect each other. However, the direction and relationship between these variables is not clear. In this regard, the studies of Fareed *et al.* (2018) and Saleem *et al.* (2020) concluded negative connotation between terrorism and economic growth. While, Bukhari and Masih (2016), Caruso and Schneider (2011), Amjad and Ismail (2014) found positive link between terrorism and GDP growth. The association between globalization and growth is also indecisive. Greenway *et al.* (1999) and Hasan (2019) showed that globalization is directly related to economic growth while, Rodriguez and Rodrik (2000) showed negative association between these two variables. Furthermore, the relationship between terrorism and globalization also showed mixed results. Hence, it can be concluded from the above discussion that globalization can be a blessing and a curse simultaneously. Thus, globalization, terrorism, and economic growth seem to affect each other. Given the issues discussed above, we hypothesize the following:

- i. Globalization and economic growth do not affect terrorism.
- ii. Globalization and terrorism do not affect economic growth.
- iii. Economic growth and terrorism do not affect globalization.

Figure 1 shows the relationship among terrorism, globalization, and economic growth. Three possible links are highlighted among the selected variables. First, Globalization may have an impact on terrorism while there is also a possibility that terrorism affects the level of integration of the economy with the rest of the world. For example, if there are more terrorist activities in any country then the global political network becomes active to rectify the conflict for global peace. In addition, more global integration increases the threat of cross broader terrorism. Hence, the link between globalization and terrorism can be established. Second, economic growth can affect the terrorist activities and terrorist activities may also influence economic growth. Pro-poor economic growth may minimize the violence and terrorism. However, higher terrorist activities are always associated with harmful effects on growth either in the form of loss of capital, assets, or uncertainty in investment decision. Third, globalization may cause growth or in some cases growth may increase global integration. For instance, higher growth of economy creates more linkages with the rest of the world, therefore, increasing globalization.

Figure 1. Relationship among Terrorism, Globalization and Economic Growth



It can be concluded from the above analysis and existing literature that a relationship exists among terrorism, globalization, and growth but the direction of relationship is not conclusive as it depends on the structure and ongoing policies of the economy. The international relations and global interdependence of domestic economies are critical in exerting a favourable effect on economic growth particularly in developing economies such as Pakistan. Economic growth can serve as an instrument to strengthen the international relations at various levels. Moreover, these global relationships are also important in affecting the terrorism inside and outside border and economic growth is also influential to effect terrorism.

#### 4. ECONOMETRIC METHODOLOGY

Standard time series econometric procedure is followed in order to establish a relationship among terrorism, globalization, and economic growth.

Figure 2. Empirical Test Procedure

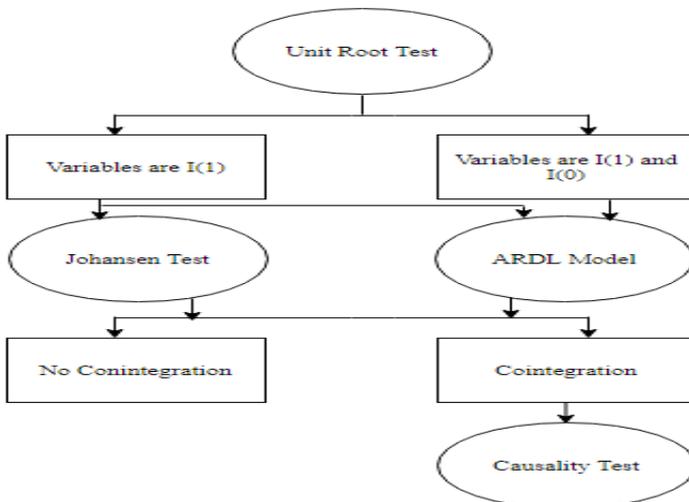


Figure 2 shows the empirical test procedure of the time series data. The standard procedure reveals that if the variables are integrated of order 1 then Johansen test of cointegration or ARDL bound test can be applied. Further, in case of cointegration the causality test can determine the direction of causality. Therefore, in this study, empirical equation is modeled as follows:

$$\ln TER_t = \phi_1 + \phi_2 \ln GLOB_t + \phi_3 \ln GDP_t + \mu_t \quad \dots(1)$$

$TER_t$ ,  $GLOB_t$  and  $GDP_t$  indicate terrorism index, globalization index, and real per capita GDP respectively. The specification will observe the impact of globalization and economic growth on terrorism. Hence, we estimate the given equation through ARDL model. The estimation results will also provide the short-run and long-run coefficients that how economic growth and globalization are affecting terrorism in case of Pakistan.

Autoregressive Distributed Lag Model (ARDL), proposed by Pesaran *et al.* (2001) is applied for examination of the linkages among globalization, terrorism, and economic growth. This test of cointegration is favoured over conventional cointegration methodologies due to some advantages. For example, ARDL bound test may be used irrespective of the order of integration of the variables as it may be integrated of order I(1) or I(0). ADRL bound test is appropriate for small data sample and provide better results in comparison with Engle and Granger (1987), Phillips and Hansen (1990) and the Johansen and Juselius (1990) approaches (Zhang and Yue (2002). Cointegration techniques hold the advantage as they are not based on the presumptions of endogeneity and exogeneity of variable. The ARDL bound test to examine the presence of cointegration is as follows:

$$\begin{aligned} \Delta \ln GLOB_t &= \alpha_0 + \alpha_{GLOB} \ln GLOB_{t-1} + \alpha_{TER} \ln TER_{t-1} + \alpha_{GDP} \ln GDP_{t-1} \\ &+ \sum_{i=1}^p \alpha_i \Delta \ln GLOB_{t-i} + \sum_{k=1}^r \alpha_k \Delta \ln TER_{t-k} + \sum_{l=1}^s \alpha_l \Delta \ln GDP_{t-l} + \mu_t \quad \dots (2) \end{aligned}$$

$$\begin{aligned} \Delta \ln TER_t &= \gamma_0 + \gamma_{GLOB} \ln GLOB_{t-1} + \gamma_{TER} \ln TER_{t-1} + \gamma_{GDP} \ln GDP_{t-1} + \\ &\sum_{i=1}^p \gamma_i \Delta \ln GLOB_{t-i} + \sum_{k=1}^r \gamma_k \Delta \ln TER_{t-k} + \sum_{\ell=1}^s \gamma_\ell \Delta \ln GDP_{t-\ell} + \mu_t \quad \dots (3) \end{aligned}$$

$$\begin{aligned} \Delta \ln GDP_t &= \delta_0 + \delta_{GLOB} \ln GLOB_{t-1} + \delta_{TER} \ln TER_{t-1} + \delta_{GDP} \ln GDP_{t-1} + \\ &\sum_{i=1}^p \delta_i \Delta \ln GLOB_{t-i} + \sum_{k=1}^r \delta_k \Delta \ln TER_{t-k} + \sum_{\ell=1}^s \delta_\ell \Delta \ln GDP_{t-\ell} + \mu_t \quad \dots (4) \end{aligned}$$

The intercept term is shown by  $\alpha_0$ ,  $\gamma_0$  and  $\delta_0$ . To examine the cointegration existence, compare F-statistic with tabulated critical bounds provided by Pesaran *et al.* (2001). If F- statistic value is higher than upper critical bound, then it implies that there is cointegration relation. However, if calculated F-statistic is smaller than the lower critical bound, no cointegration hypothesis will be accepted. The result regarding cointegration is indecisive if the F-statistic value lies between higher and lower and critical bounds.

## 5. DATA AND CONSTRUCTION OF VARIABLES

### 5.1. Terrorism Index

In the current study we have developed a terrorism index with the help of principal component analysis (PCA). The index is developed by using three indicators of terrorism i.e. (i) incidents, (ii) fatalities, and (iii) injuries. Index is developed by standardizing each variable and then PCA is applied to obtain weight. This index is constructed as follows:

$$Terrorism\ index = \sum_{j=1}^m \alpha_j Z_j$$

$$Z_j = \frac{X - X^{min}}{X^{max} - X^{min}}$$

Where  $\alpha_j$  is the derived weight of each variable and  $Z_j$  is the scale free observation of  $j^{th}$  variable that follows the normalization technique.

$$Terrorism\ Index = \alpha_1 Z_1 + \alpha_2 Z_2 + \alpha_3 Z_3$$

$$Terrorism\ Index = \alpha_1(Incidents) + \alpha_2(Fatalities) + \alpha_3(Injuries)$$

$\alpha_1, \alpha_2$  and  $\alpha_3$  is the corresponding weight of each variable obtained through PCA.  $Z_1, Z_2$  and  $Z_3$  is number of incidents (events), number of fatalities, and number of injuries respectively. The constructed index lies between zero to one. Hence, values closer to zero show low terrorist activities while values close to one indicate high terrorism.

Goodness of fit of terrorism index is measured by various indicators. These indicators are mentioned below.

Discrepancy	0.018
Root mean square residual (RMSR)	0.024

Bentler-Bonnet normed fit index (NFI)	0.946
Bollen relative fit index (RFI)	0.911

Smaller values are desirable for Discrepancy and Root mean square residual (RMSR) whereas, the value should be 0.90 or greater for RFI and NFI. Results show that all the indicators are in desirable range (fit range). Data on incidents, fatalities, and injuries are collected from global terrorism database (GTD).

## **5.2. Globalization Index**

The study uses the Konjunkturforschungsstelle (KOF) index of globalization. KOF index covers three major aspects comprised of economic, social, and political dimensions of globalization. It is considered as a comprehensive index among the indices and proxies (FDI, capital flows, trade flows and etc.) of globalization. The overall globalization index is derived by using three major dimensions of globalization. Economic dimension uses the variables such as trade and financial flows, while trade restraints are also used in the construction of the index. Political globalization comprises of a set of variables that are related to political collaboration at international level. Social globalization mentions the variables that indicate the flow of information, ideas, people, and culture. Hence, a total of 23 variables are used for the construction of KOF index. The data on KOF index is attained from ETH Zurich data base ([www.kof.ethz.ch](http://www.kof.ethz.ch)).

## **5.3. GDP Per Capita**

Real GDP per capita is used to reflect economic growth of an economy. Data are taken from the data base of World Bank ([www.Data.worldbank.org](http://www.Data.worldbank.org)). All the indices and data used in this study are converted into log form. This study covers a time period from 1972 to 2019.

## **6. RESULTS AND DISCUSSION**

Augmented Dickey-Fuller (ADF) test has been used to test the stationarity of data. The results are presented in Table 1. All the three series are found to be stationary at first difference at 1% level of significance.

Table 1. Results of ADF Unit Root Test

Variable	Test statistic at level	Test statistic at first difference	Conclusion
Real per capita GDP	-0.347	-5.428*	I(1)
Globalization index	-0.354	-6.187*	I(1)
Terrorism index	-1.031	-7.721*	I(1)

To apply ARDL, it is essential to choose lag length. The criteria for lag length are presented in Table 2. The table indicates Sequential Modified LR Test (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC), and Hannan-Quinn (HQ) Information Criterion for choosing appropriate lag length. It is important to note that all the criteria are choosing lag one. Hence, suitable lag length for the given model is one in case of Pakistan.

Table 2. Lag Selection Criteria

Lag	Log L	LR	FPE	AIC	SC	HQ
0	78.884	NA	6.38e-06	-3.449	-3.327	-3.404
1	261.993	332.924*	2.33e-09*	-11.363*	-10.876*	-11.182*
2	268.196	10.432	2.67e-09	-11.236	-10.384	-10.920
3	272.181	6.157	3.41e-09	-11.008	-9.791	-10.557

Results of ARDL bound test to cointegration is presented in Table 3. The value of Wald F-statistics is 6.777, and is greater than the upper bound at 1% level of significance. This shows that terrorism, globalization, and economic growth have a long-term relationship in case of Pakistan during 1972 to 2019. The present study uses the critical bound provided by Pesaran *et al.* (2001). Section II of this table shows diagnostic test. Breusch-Godfrey serial correlation LM test indicates no serial correlation. Moreover, white test and ARCH test of heteroskedasticity reveals that residuals are free from the problem of heteroskedasticity. Johansen test to cointegration is also employed to check the robustness of results for long-run association among terrorism, globalization, and economic growth. Johansen test results are shown in Table 4. Since all the under consideration variables are integrated of order one I (1), thus, we can also apply Johansen test. Trace test and Lmax test (critical value is less than trace statistic and Lmax statistic) indicates existence of one cointegration vector at 5% level of significance. Therefore, the time series data

are mutually cointegrated by a common vector. It endorses the robustness of long-term association among terrorism, globalization, and economic growth.

Table 3. Results of ARDL Bound Testing to Cointegration

Section I-Model: $TER_t/GDP_t, GLOB_t$			
Wald Test Stat	6.776670*		
Critical Bound	I(0)	I(1)	
1%		5.288	6.309
5%		3.739	4.855
10%		3.182	4.126
Section II-Diagnostic Test			
R <sup>2</sup>	0.603		
Adjusted R <sup>2</sup>	0.509		
$\chi^2$ LM Serial	0.707 (0.705)		
$\chi^2$ White Test	27.423 (0.441)		
$\chi^2$ ARCH	1.194 (0.275)		

Note:\* Indicates significance at 1% level. Values in brackets show probability.

Table 4. Results of Johansen Test

Rank	Eigen value	Trace test	Critical value	Prob.	Lmax test	Critical value	Prob.
0	0.380	30.644	29.797	0.04	21.577	21.131	0.043
1	0.127	7.066	15.494	0.57	6.136	14.264	0.595
2	0.020	0.929	3.841	0.335	0.929	3.841	0.335

Short-run analysis is displayed in Table 5. It shows that economic growth and globalization is decreasing terrorism in Pakistan but they are not statistically significant. Error correction term (ECT) is statistically significant at 1% level and the negative sign with ECT implies that the entire system converges to long-term equilibrium with the speed of 107%. Diagnostic tests show that there is no problem of serial correlation and heteroskedasticity. In order to check serial correlation, LM test is employed which shows no indication of serial correlation. ARCH test and White test is used to detect heteroskedasticity and the result implies that the model is free from the problem of heteroskedasticity. Coefficients of long-run estimates are given in Table 6. Economic growth is positively affecting terrorism in Pakistan. It means that if per capita GDP rises by 1%, it will raise terrorism by 7.13%. Surprisingly, the present study shows positive association between per capita GDP and terrorism but it is consistent with the finding of Caruso and Schneider (2011) and Shahbaz (2013). However, it can be noted that GDP per capita growth is linked with uneven income distribution

in Pakistan for the last few years (CIA fact book, 2016). Higher income inequality results in higher poverty and consequently, it encourages the poor segment to fulfill their basic needs through unfair mean. The unfair means can take the violent form of armed attack, bombing, and even suicide attacks. Social, economic, and political injustice are considered to be potential sources of terrorism and in case, if higher economic growth is concentrated to only upper segment of the society then its consequence can be seen in the shape of terrorism.

Table 5. Results of Short-Run Analysis

Variable	Coefficient	t- stat
Dependent variable: lnTER		
Constant	0.078	0.692
$\Delta \ln \text{GDP}$	-3.323	-0.387
$\Delta \ln \text{GLOB}$	-1.156	-0.221
ECT	-1.072*	-4.231
Diagnostic test		
R <sup>2</sup>	0.561	
Adjusted R <sup>2</sup>	0.511	
$\chi^2$ LM Serial	0.136 (0.713)	
$\chi^2$ White Test	5.848 (0.970)	
$\chi^2$ ARCH	0.707 (0.400)	

Note: \* Indicates significance at 1% level. Probability values are given in parenthesis.

In the same perspective, a relatively recent finding of Lassoued *et al.* (2018) and Korotayev *et al.* (2021) also provide negative evidence on growth-terrorism nexus for a group of developing economies. Another possible explanation for this result can be through a link between growth and human capital. Growth without any increase in human capital indicator is a possible cause to bring an increase in terrorism in economies. However, economic growth accompanied with investment in human capital can help to reduce terrorism, i.e., higher level of schooling brings a decrease in terrorism attacks.

Another important result of the current study is the negative relationship between globalization and terrorism. If globalization increases by 1%, it will decrease terrorism by 0.127%. Although the negative impact has very low magnitude, the power of global networks in influencing the national economics cannot be ignored. International global networks appeared to be helpful in reducing terrorist activities in Pakistan. Globalization, particularly political integration with rest of the world, provides technical and financial assistance to overcome terrorism in Pakistan. Therefore, there is no harm for Pakistan to be in the modern wave of globalization. Our empirical findings are supported by the prior literature. For instance, Rajput *et al.* (2021) elucidated

the globalization- terrorism nexus for developing economies and concluded that economic globalization is inversely connected with terrorism activities. Similarly, Asongu and Biekpe (2018) also provide evidence regarding a negative interconnection between globalization and terrorism for African economies.

The second part of the result shows that there is no problem of heteroskedasticity and serial correlation as it is evident from LM serial, White test and ARCH test, presented in the diagnostic section of the Table.

Table 6. Results of Long-Run Analysis

Variable	Coefficient	t- stat
Dependent variable: lnTER		
Constant	-21.921*	-9.643
ln GDP	7.132*	3.732
ln GLOB	-0.127**	-2.089
Diagnostic test		
R <sup>2</sup>	0.892	
Adjusted R <sup>2</sup>	0.773	
χ <sup>2</sup> LM Serial	4.231 (0.116)	
χ <sup>2</sup> White Test	6.755 (0.229)	
χ <sup>2</sup> ARCH	0.036 (0.748)	

Note: \* and \*\* indicates 1% and 10% level of significance respectively. Probability values are provided in parenthesis.

The stability of short-run and long-run estimates are derived with help of CUSUM and CUSUM square test, suggested by Pesaran and Shin (1999). Figure 3 and Figure 4 show that CUSUM and CUSUM squares are between the critical boundaries, suggesting the accuracy of both long-run and short-run parameters.

Figure 3. Plot of CUSUM

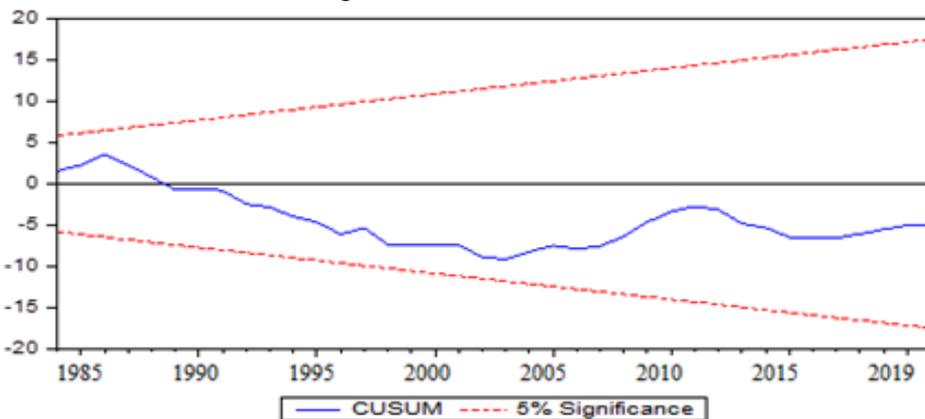
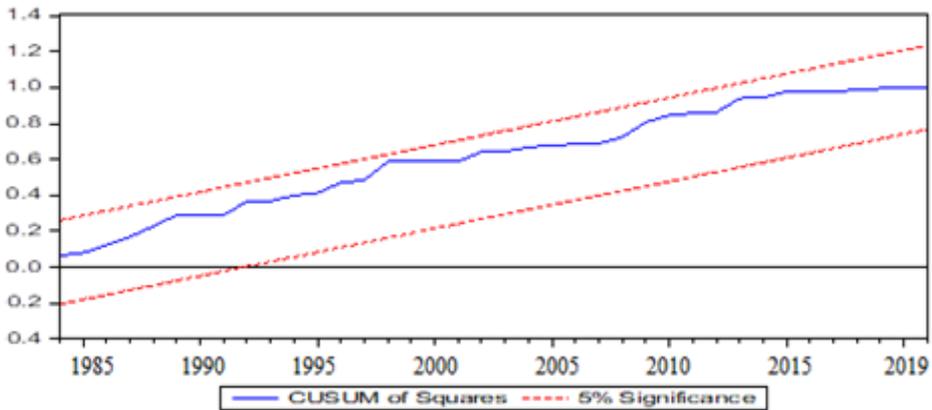


Figure 4. Plot of CUSUM square



In order to find the causality direction, Granger test of causality is undertaken. The results of causality are presented in Table 7.

Table 7. Results of Granger Causality Test

Null Hypothesis	F-Statistics	Conclusion
Terrorism does not cause economic growth	1.817	Uni-directional causality is found from economic growth to terrorism
Economic growth does not cause Terrorism	7.431*	
Globalization does not cause economic growth	0.523	No causality is found between globalization and economic growth
Economic growth does not cause globalization	2.023	
Globalization does not cause terrorism	3.111***	Bidirectional causality is found between terrorism and globalization
Terrorism does not cause globalization	3.517**	

Note: \*, \*\* and \*\*\* indicates 1% , 5% and 10% level significance respectively.

Results show one-way causality from economic growth to terrorism, while two-way causality is evident between globalization and terrorism. These results suggest that higher economic growth with unjust income distribution causes terrorism. Therefore, it is recommended to distribute the economic benefits evenly in order to halt the violent activities. No evidence of causality is found between globalization and economic growth. The probable reason of this result is that Pakistan is unable to get economic benefits from globalization because of its internal structural issues. Interestingly, the bidirectional causality between globalization and terrorism is showing the strength of global network in influencing the terrorism activities in Pakistan.

## 7. CONCLUSION

Globalization can be defined as a phenomenon in which socio-cultural, political, and economic relationships are recognized across the globe. It creates higher degree of interdependency across geographic distance. Globalization is indeed the most crucial concept of the current era. However, no significant or universal definition of globalization exists as it is perceived as a multilayered process. There is also lack of agreement on the benefits of globalization due to its diverse impacts on various economic and non-economic activities. Moreover, it has transformed the structure of developing economies through providing economic and technological assistance. The process of globalization has accelerated due to various technological innovations, strategies, and policies. Lower transportation and communication cost has increased the global integration at every level. However, according to Schaub (2004) more integrated economies are more likely to experience terrorist attacks. These terrorist activities result in the loss of valuable assets including human and physical capital. Pakistan is also among one of the economies that suffered severely from terrorist activities.

The current study inspects the possible link among globalization, terrorism, and economic growth. The cointegration test of ARDL is employed in order to check the long-run association between these variables. Empirical evidence shows that the three variables have long-run association. Robustness of long-run link among terrorism, globalization, and economic growth is also confirmed by applying Johansen test of cointegration. Results show that there is a positive association between terrorism and economic growth in Pakistan. The current study indicates that 1% increase in per capita GDP increases terrorist activities by 7.15%. Higher GDP per capita growth with uneven income distribution results in higher poverty and, therefore, terrorism. The benefits of economic growth must be distributed evenly in order to cope with the problem of terrorism. Results show that globalization and economic growth has no relationship. In order to derive the economic benefits of globalization, it is essential to manage the internal structural problems. Another important finding of the present study is that globalization reduces terrorism. Pakistan needs to further strengthen the global relations to fight terrorism at national and transnational levels.

The relationship among globalization, terrorism, and economic growth is complex. Findings show that Pakistan is unable to get economic benefits from the current wave of globalization while globalization appeared to be influential in decreasing the terrorist activities in Pakistan. Therefore, it is recommended that government need to facilitate the process of globalization as

the power of global networks is helpful in decreasing terrorism. Furthermore, Pakistan can participate in the economic benefits of globalization by smoothing the internal structural problems such as macroeconomic and political instability. A positive link between per capita GDP and terrorism serves as a challenge for policymakers. However, targeted growth with even distribution of income can halt the terrorist activities.

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## Negotiating Identity and Performing Leadership in Discourse: A Gender-Based Study

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### Abstract

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*This research adopts a social constructionist perspective and a discourse approach to explore how men and women in leadership positions construct their identities and perform leadership within workplace talk. The key objectives of the study are to analyze uniformity and variation in the discourse features and interactional styles, the role of norms and stereotypes in determining the linguistic choices available to male and female leaders, and the implications of uniformity and variation in their language use. The theoretical framework of this study draws on Judith Butler's Performativity theory (1990) along with West and Zimmerman's concept of 'Doing gender' (1987). The data for this research is collected through semi-structured in-depth interviews conducted with males and females holding leadership positions in the selected research sites. The data analysis reveals that both male and female leaders use a variety of discourse features and employ language as an effective tool to negotiate identity and perform leadership roles within their workplace settings. The analysis highlights that both male and female leaders at times reinforce the normative patterns of interactional style for doing leadership by using discourse features normatively associated with their gender. The analysis also highlights that male and female leaders also contest and redefine the normative associations of discourse features and perform leadership by employing features of discourse that are stereotypically not associated with their gender.*

**Keywords:** Identity Negotiation, Discourse approach, Performativity Theory, Workplace Discourse

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## 1. INTRODUCTION

The research on language, gender, and leadership within workplace settings has gained considerable attention in recent years. Some of the recent studies have mainly adopted the discourse approach on performing gendered leadership (Angouri & Marra, 2011; Baxter, 2010; Mullany, 2007; Holmes, 2005, 2006.). Every time men and women in leadership positions speak, they are negotiating what it means to be a leader by using a variety of discursive strategies such as assertiveness, humour, and direct linguistic strategies to accomplish their leadership goals, (Clifton, 2012). The discursive strategies adopted by individuals interact with many other aspects of their identity such as gender, class, ethnicity, race, and status (Bargiela-Chiappini, Nickerson & Planken, 2007). All these aspects may act as enabling or constraining forces for allowing certain linguistic choices to people as they exercise leadership within their workplaces. Looking at leadership from this perspective, it can be said that individuals are continuously negotiating and managing their professional identities through various ways in which they interact within their workplace settings (Holmes & Stubbe, 2003).

The social set up in Pakistan is mainly traditional, where social and cultural practices are conducted predominantly on normative patterns. Despite slow and gradual change particularly in the urban areas, the push and pull of normative patterns still characterize the personal and professional domains of the Pakistani society. The roles and responsibilities of individuals are mainly distributed along gender where women hold roles in the domestic/family space, whereas the public/professional sphere is still dominated by men (Roomi & Parrott, 2008; Manzoor, 2015; Rehman & Roomi, 2012). However, trends have started to change over the past three decades, as more women have taken up careers in various professions. This change has a direct and significant bearing on social patterns of Pakistani society in general, but on the social practices of workplaces in particular.

Language and gender are salient dimensions of the social practices that stand out prominently in social interactions where structures of masculinity and femininity seem to act as organizing principles (Antaki & Widdicombe, 1998). Sarangi & Roberts (1999) assert that our social and professional lives are linguistically and discursively mediated. They argue that language plays a central role in the construction of an individual's personal and professional identities because it is through language that we enact who we are and where we belong reinforce the same argument that language provides us with a flexible tool that can be employed in multiple ways for indexing various facets

of our personal and professional identities, Angouri & Marra (2011). They highlight that as individuals make multiple linguistic choices in their communication, their choices have significant implications in claiming, negotiating, and renegotiating their identities. This dynamic and discursive conceptualization of identity presented in the preceding lines is interactionally based, that moves away from the essentialist perspectives on identity. The earlier research has analyzed the relation between language and gender from an essentialist perspective taking into consideration the fixed and static categories of race, class, age, gender, and social status, (Labov, 2006; Lakoff, 1975; Trudgill, 1974). Later studies adopt a socially constructed perspective to explore the relation between language and gender identity (Baxter, 2003; Butler, 1990; Holmes & Stubbe, 2003, 2015; Holmes, 2006; Zimmerman, 1998).

The latter perspective does not view gender identity as an essential, pre-given, fixed social category, but it conceives gender identity as a social construct; as something accomplished in discourse as individuals communicate within various settings (Holmes, 2006). Hence, speakers within an interactional setting are seen as doing and performing gender rather than merely 'being' a particular gender (Coates, 2015). The notion of doing gender and gender performativity (Butler, 1990) has major implications for the present research because it offers a versatile model for examining how people choose to create and assert distinct personas from a variety of linguistic tools (West & Zimmerman, 1987). Workplaces are, thus, important institutional settings for exploration of language and gender identity as they offer insight into interactional enactment of professional identities and the intersection between gender and leadership.

The current study adopts a social constructionist perspective to examine how men and women in leadership positions construct and negotiate their identities through workplace discourse. The social constructionist perspective is well suited for this study because instead of perceiving identity as a fixed, pre-given social category, the social constructionist perspective provides a dynamic and flexible lens that views gender identity as socially constructed which may vary across various contexts. In any society, language plays an important role in constructing the social world because "language is an essential means by which society is created, (Muntigl, 2002, p. 49). The social constructionist perspective brings out this constitutive capacity of language in the creation of the society or social world that has important implications for studies such as the present one, aiming to examine the

relationship between identity and language in performing leadership at the workplace.

Hence, the social constructionist perspective and the discourse approach are well suited for the current study as they provide an appropriate analytical lens for exploring how identity is negotiated within discourse. The study focuses on the discourse features and the discursive strategies used by male and female leaders while performing their leadership roles. The study brings out how they negotiate between their gender and professional identities by employing language as a flexible tool. The discourse approach provides a flexible model for investigation by allowing space for taking into account the variation according to context, roles, and relationships within workplace settings. The very notion of negotiation and executing leadership, which this study aims to explore, is about flexibility and variation, therefore by adopting discourse approach, the current study explores the phenomena of identity negotiation as it takes place within the micro instances of interaction.

The focus of the present study is the features of interactional styles and the discourse features employed by women and men holding positions of authority in the selected universities. The study is confined to focusing on interactional styles only that are perceived to index masculinity and femininity.

This study is limited because the findings presented are based on the analysis of data collected from the selected public sector universities. Another limitation of this study is that the analysis is based on self-reported data collected through interviews from the selected research participants. The analysis is also limited because due to self-reported data, it may involve personal biases and individual perceptions. In order to mitigate the element of personal biases and individual perceptions, the researcher has analyzed interviews of four experienced male and female leaders and has attempted to highlight the merging patterns from their insights. Furthermore, the researcher has also attempted to place the analysis in light of the wider research reviewed for the current study. It is also important to mention here that the self-reported data has important value for this study as it brings out first-hand insights of experienced male and female leaders.

Keeping in view the above contextualization, the research will proceed with the following research objectives:

### **1.1. Research Objectives**

1. To explore the variation and uniformity in the use of discourse features used by males and females in position of authority,

2. To analyze the role of gender norms and stereotypes as enabling or constraining force for the linguistic choices used by men and women while performing leadership roles,
3. To highlight the implications of variation in discursive strategies of male and female leaders.

### **1.2. Research Questions**

1. How do male and female leaders employ various discourse features to perform leadership roles in their workplace settings?
2. What is the role of gender norms and stereotypes in determining the linguistic choices available to male and female leaders?
3. What are the implications of variation in the use of discursive strategies employed by male and female leaders?

### **1.3. Statement of Problem**

For decades, the workplace has been dominated by men who have mostly held positions of authority. Hence, leadership roles and dominant perceptions about how leaders communicate in professional settings have an imprint of perceived masculinity (Baxter, 2010). As more women are entering the professional settings and taking up leadership roles, it has consequences for the workplace interaction and accomplishment of leadership by female as well as male leaders. Using gender as an important lens, this study explores how males and females in a position of authority negotiate and employ various discourse strategies while ‘doing’ leadership. By focusing on the features of interactional styles, the study also attempts to get insights into the role of gender norms and stereotypes as enabling or constraining forces affecting the linguistic choices available to male and female leaders as they do leadership. By highlighting the variation in the use of discursive strategies of male and female leaders, the study elaborates the role of language in negotiation of identity as individuals perform their leadership roles. The study concludes on unravelling the implications of variation in the use of discursive strategies.

## **2. LITERATURE REVIEW**

The discourse approach to the study of language gender and identity has guided many research studies by stimulating interest in the exploration of

workplace discourse, especially since the 1990s (Cameron, 2001; Collinson, 2003; Holmes, 2005,2006; Holmes & Stubbe, 2003). Burke & Davidson (1994) elaborate that as women occupy managerial and administrative positions, significant change has been observed because women leaders bring in more flexible and alternative models of performing leadership roles. This tendency has affected workplace settings and interactional patterns as female leaders employ a range of polite, persuasive, and assertive features of discourse for getting things done. As for Tannen and West (1994; 1990), as more women reached higher positions and claimed leadership roles which were previously dominated by men, the studies focused on workplace discourse and explored features of interactional styles of women and men to analyze how they performed leadership through discourse (Holmes, 2000; Baxter, 2010; Angouri & Marra, 2011).The studies quoted are important for the present research because such studies established the need and significance of exploring workplace discourse from the gender perspective. These studies are also significant because they give an insight into how male and female leaders negotiated between their gender identity and professional roles; also the focus of the present study.

Adopting a discursive approach, Hall (1995) carried out a research on the expression of fantasy line operators. Reflecting on discursive strategies and the attributes of the operator's interaction styles, the research investigated how gender was performed through talk. Hall's research is significant to quote because it demonstrated the performative potential of language, as the results of the study revealed that both female and male operators used language as a tool for performing different facets of gender identities. Wodak (2003) conducted a study on the language of female parliamentarians to explore how they employed language as a tool in a male-dominated context. The analysis was based on data collected through interviews and the key focus of Wodak's study was on transportable identities. The main findings of the study revealed that the female parliamentarians used a variety of discursive strategies as they oriented to various identities in multiple interactional settings. They switched between I and WE structure, direct and indirect discursive strategies to position and negotiate their individual, national and political identities. They invoked various identities in their interview narratives (e.g., as woman, Swedish, Parliamentarian, EU). Wodak highlights the aspect of multiple identities and how women employ language while orienting to these multiple identities within their narratives. Wodak's study holds particular relevance and provides base for this paper because the current research also focuses on the notion of identity

negotiation while performing leadership roles (negotiation between gender and professional identity as leaders).

Holmes (2006) study on workplace talk provides useful methodological and analytical insights for the present research. Adopting discourse analytical approach, her study focused on the structures of interactional styles of women and men in position of authority. Based on detailed analysis of excerpts from workplace discourse data, the study concludes that both females and males in positions of authority employ rich linguistic repertoire and use a range of discourse strategies for performing leadership. The findings of Holmes study provide a broad-based analytical spectrum for this paper by illustrating that the discursive enactment of leadership has moved a long way from its stereotypical associations with a masculine model of performing leadership.

Baxter's (2010) focused on the language of female leadership in the corporate sector. She concluded that there is no exclusive language of female leadership; rather, women leaders use a variety of discourse features (imperatives, direct and indirect structures for disagreements and disapprovals, *I* and *We* statements for giving directives and orders, and courtesy expressions) conventionally indexed as masculine as well as feminine. Such studies have significant implications for discursive enactment of leadership roles and for normative association of leadership with masculinity because similar studies have found that discourse features are neutral linguistic resources employed by both male and female leaders to position themselves as assertive or collaborative leaders. The findings of Baxter's study provide useful basis for the current paper by giving insights about how leadership is executed discursively.

In order to situate this research paper within the local context, it is also important to review some relevant studies focusing on the discursive construction of identity within the Pakistani context. For example, exploring the performative potential of language, Rahman (2009) conducted a study on the language of call centers in Pakistan and analyzed how call center operators adopted a native-like accent to cater to their foreign clients by performing their desired identities. The study explores the call center operators' dynamic process of negotiating between personal and professional identities by employing language as a flexible resource. The key finding of this study is that identity is not given or fixed but performative and language is central to this performance. This finding brings out the discursive and dynamic aspect of identity that forms

an important basis for the current paper since it aims to explore the construction of identity within discourse.

A more recent study conducted by Hassan & Unwin (2017) focused on the language use of male and female young students in Pakistan. The study explored how the young students constructed and negotiated their identities through mobile phone communication by analyzing the impact of internet-based communication on social media. The study concluded that as youngsters communicate on internet-based spaces through their smartphones, they are found to be contesting cultural norms while constructing various personas. Qadir & Riaz's (2015) explores how Pakistani female politicians construct their gendered political identity in the talk shows and how male politicians respond to these identities positioned by female politicians. The study concludes TV talk shows used by male and female politicians as a discursive avenue for constructing and contesting gendered political identities. Umar & Rasul (2015) conducted a study on Pakistani print advertisements. By analyzing the graphical representations and the lexical choices, this study explored the construction of gender identities of males and females. The key finding of the study is that print media reproduces and reinforces the stereotypical masculine and feminine identities in accordance with the stereotypical notions.

Salam (2020) explored how Pakistani women constructed their gender identities on Facebook through visual and linguistic resources. By conducting discursive analysis of these resources, the study concluded that Pakistani women use Facebook as a discursive site where they employ visual and linguistic choices to reinforce their normative gender identities and also to contest and create dynamic and new versions of gender identity. Hence, the study highlights the discursive power of language in reinforcing and contesting the normative versions of gender identity.

The studies mentioned in this section, both in the western as well as Pakistani contexts, have focused on the discursive negotiation and construction of identity within spoken, written, and visual discourse establishing language as an important resource for construction of identity. However, it is important to mention that whereas in the western context, a number of studies have focused on workplace discourse and discursive performance of leadership, it is hard to find such studies being carried out in the Pakistani context. To best of the researcher's knowledge, the studies focusing on discursive negotiation and construction of leadership identity within workplace discourse are nearly non-existent in the Pakistani context. Thus, the current study aims to fill this gap by presenting gender-based analysis of workplace interaction and the dynamics of identity negotiation and performance of leadership in discourse.

### **3. THEORETICAL AND ANALYTICAL FRAMEWORK**

This research mainly draws on Judith Butler's theory of performativity where gender identity is conceptualized as a socially constructed category. Butler adopts performative perspective on gender as she asserts gender does not pre-exist discourse, rather it is performed within it (Butler, 1990). So, given the performative model, the agency and power lie within the discourse and not outside it. Butler's performative perspective on the potential of discourse has relevance for this study by implying that interactional settings are sites where identities are (re)constructed, negotiated, or challenged as individuals engage in discursive practices. According to Butler, 'feminine' and 'masculine' are neither what we are nor traits we have but the effects we produce by way of particular things we *do* (Butler, 1990).

Butler looks at gender not as static and given but as 'repeated stylization of the body' that, over time, results in the appearance of the phenomenon as natural and given (Butler, 1990). Butler's performativity theory, provides a dynamic, flexible, and fluid analytical perspective on gender identity where identity is not seen as a state of being, rather understood as a fluid process of becoming which can change within the discourse. The second theoretical perspective which underpins this study is the notion of 'doing gender' presented by West and Zimmerman (1987). They argued that an individual's gender is not about 'having' certain traits or characteristics but it is fundamentally about 'doing' which happens within interactions, (West & Zimmerman 1987). Like Butler's performativity theory, the doing gender perspective is also a departure from 'having' fixed traits and identity towards 'doing' which is a flexible perspective with the potential to vary according to contexts and settings.

Although Butler's theory of gender performativity has innovative strength, it has been criticized on various counts. Williams & Harrison (1998) criticize theory of performativity for being equally foundationalists (p. 88). They argue that Butler's theory of performativity is presented as challenging the static, pre-existing conception of gender and present the coming-into-being of gender within the performance. However, they argue that the very performances are also based on the pre-existing notions of gender and individuals recreate the same notions through gendered performances. Stone (2005) raises a point on Butler's notion of subverting gender norms through performativity. He argues that despite making claims about subverting the prevailing gender norms, the basic question about subversion remains unattended in Butler's theory. He further argues that instead of elaborating on

the notion of subversion, the focus in performativity theory remains on the possibility of subversive agency and the desirability of subverting the prevailing gender norms, Mills (2000) and McNay (1999) raise concern on the notion of agency presented in Butler's theory. Both argue that the notion of agency as proposed by Butler is fundamentally negative. They argue that if the power of subject is defined as his ability to repeat or redo and the agency of subject is reduced to reaction and resistance, then the notion of agency is fundamentally negative because it does not account for what makes the actions/performance of individuals uniquely their own.

The concept of 'doing gender' presented by West & Zimmerman (1987) has also received some criticism as researchers made distinctions between doing and redoing of gender. Deutsch (2007) and Connell (2010) critiqued the notion of doing gender and proposed the notion of redoing of gender. For example, Connell (2010) argued that the concept of doing gender does not adequately account for the experiences of trans people. She argues that instead the concepts of undoing gender or redoing gender are the notions that better account for the experience of trans people because they "often attempted to meld together masculine and feminine gender performances" (p, 39). She further argued that trans people resisted the pressures of gender binary by "adapting a hybrid gender style of interacting with others" (p. 42). Connell (2010) also preferred interest in exploring how gender could be undone instead of 'doing gender' which may run the risk of 'doing' gender according to the prevailing gender norms.

Despite all the criticism, the theory of gender performativity and the notion of doing gender have been greatly influential for investigation of gender identity construction. Hence, the theoretical and analytical framework of performativity and doing gender is well suited for this study.

### **3.1. Research Sample**

The researcher has employed purposive sampling and non-probability convenience sampling technique for this study. Adopting purposive sampling as a technique, the researcher selected a sample that is believed to be representative of the given population. The researcher conducted twelve interviews in all and the interviewees included six female senior faculty members and six male senior faculty members. All interview participants held a Ph.D. degree and an experience of more than fifteen years of working in academia. In order to capture the discursive negotiation of identity and performance of leadership, the researcher chose senior male and female faculty members who held leadership positions on various levels as vice chancellors,

deans, and heads of departments. In order to capture the gender dynamics of how leadership identity is performed discursively, the researcher selected three public sector universities as research sites including a women university with predominantly females in the top leadership positions, a gender segregated male-only university setup having only males in the leadership positions, and a mixed-gender setup where both men and women held senior leadership positions. The universities selected for this research are based in Islamabad and Rawalpindi. Since the researcher is a resident of Rawalpindi it was convenient for her to access these academic workplaces which also rationalizes the used of non-probability convenience sampling technique for this study.

### **3.2. Data Collection**

Data for this research has been collected by using interviews as the main tool. The researcher has conducted in-depth semi-structured interviews with the help of an interview guide was prepared after a detailed review of relevant literature. The researcher conducted interviews of male and female participants from selected universities who hold positions of authority as VC, dean, head of departments, and chairs so that they can provide first-hand insights about how they negotiate their identity and do leadership by using various discourse features. The interviews were audio-recorded and transcribed verbatim for analysis. The extracts relevant to the current study have been taken out from detailed interview scripts.

### **3.3. Ethical Considerations**

The researcher bore in mind important ethical considerations and sought prior permission for conducting interviews. This author got written consent signed before the commencement of each interview. This researcher also requested for prior consent of interviewees for audio-recordings and used a mobile phone as a recording device to ensure the interviewees are not intimidated by unfamiliar recording technology. The researcher has also ensured confidentiality by using pseudonyms for the interviewees during analysis.

## **4. ANALYSIS**

The analysis is underpinned by Butler's theory of gender performativity and the notion of doing gender presented by West and Zimmerman. However, the discursive analysis of the features of interactional

styles is based on the parameters drawn from Holmes listed as widely cited features of feminine and masculine interactional styles (2001, 2006). They have been established as parameters on the basis of extensive research on workplace discourse. For example, many researchers have analyzed workplace discourse by drawing on these widely cited features of interactional styles (Baxter, 2010; Holmes, 2006).

These features are considered as normative and appropriate discursive means that males and females may employ in the workplace to signal their gender or leadership identity. They provide a useful starting point for analyzing the discursive strategies and discourse features of workplace talk as Holmes (2006) asserts that, “they constitute implicit, taken-for-granted norms for gendered interaction against which particular performances are assessed (7).

Widely cited features of feminine and Masculine Interactional Styles  
(Adopted from Holmes 2006)

Feminine	Masculine
Facilitative	Competitive
Supportive feedback	Aggressive interruptions
Conciliatory	Confrontational
Indirect	Direct
Collaborative	Autonomous
Minor contribution in public	Dominates (public) talking time
Person/process oriented	Task/outcome-oriented

The in-depth interviews mainly sought insights about the features of interactional styles (Holmes, 2006) of the interview participants, the role of gender norms and stereotypes in determining the discursive choices they employ, and the dynamics of variation and uniformity in the discursive strategies they use as they perform leadership roles. Keeping in view the scope of this paper and space limitations, the researcher has shortlisted four aspects of the interactional styles of male and female leaders for the sake of analysis in the forthcoming section.

#### **4.1. Women & Men holding the position of authority in universities and their communication style**

The research on language and gender has come a long way from labelling communication styles and linguistic features with particular genders to viewing them as neutral and flexible resources equally accessible to males and females. In order to get an insight into the communication styles of both

male and female, the interviewees were asked to reflect on the features of interactional styles as they communicate while performing leadership roles. Dr Sonia in paragraph 1.1 talks about her communication style while she enacts her roles as vice-chancellor. She elaborates that initially since she did not have female role models in highest position as hers, she enacted her authority on a *masculine role model* using direct and assertive linguistic expressions in order to prove that she deserves the high position. Para 1.3, Dr. Afia, who is holding a position as dean, refers to her own communication style as *submissive, friendly* and *indirect* elaborating that she is very *careful of offending her subordinates*. She also adds that assertiveness *does not come to her naturally*. Para 1.5 Dr. Sarah refers to her own communication style as a combination of assertive and collaborative depending on the nature and urgency of the task in hand. Para 1.6 Maria shares her observation about how women enact authority in interaction. She elaborates that mostly the interactional style of women in a position of authority is *not assertive or challenging*; rather they try to *have a win-win situation*. Instead of communicating aggressively or assertively, women leaders make *efforts to make everybody work through*. The male respondents also gave mixed responses. Dr Shoab, in para 1.7, states that academic institutions are settings that do not always require you to be an assertive leader, but you have the space to communicate politely because in his view *politeness brings better results*. In para 1.8, Dr. Hashim elaborates that he chooses to enact his leadership role assertively because for him implementation of institutional rules is paramount and if implementation requires him to be assertive, he will comply. In para 1.9, Dr. Malik states that his communication style is a combination of politeness and assertiveness depending on various contextual factors that include the urgency of the task in hand and the pressure from higher authorities.

**Commentary:** The above analysis highlights that both male and female participants employ variation in their communication styles and discursive strategies for performing their leadership roles. The responses of participants also reveal that the discursive strategies employed by them do not always conform to the stereotypical associations of the features of interactional styles. For example, the female participants reported using direct and assertive discursive strategies, performing their leadership role on a normative masculine model and constructing themselves as autonomous leaders. Male respondents also reported using polite and indirect discursive strategies as they perform leadership roles. Both male and female respondents also reported adopting a person-oriented discursive approach while enacting leadership as they pointed

being careful about offending others, creating a win-win situation and using politeness as a discursive strategy to bring better results. Politeness, indirectness and a person-oriented approach are features of discourse normatively associated with feminine styles of interaction, whereas being direct and assertive are indexed as features of masculine interactional style. The key finding of the above analysis is that both male and female leaders challenge the normative associations of these discourse features by doing gender and performing leadership in unconventional way. This study also finds that both male and female leaders adhered to fixed and fluid accounts of gender and professional identities bringing in new versions of leadership.

The above findings of this research are in line with studies by Holmes (2006) as they reiterate the same argument that the discursive enactment of leadership has moved a long way from its stereotypical associations with a masculine model of performing leadership. Like Holmes (2006), the findings of this paper highlight that the interactional styles of male and female leaders are diverse and flexible depending on various settings, the contextual needs and an individual's approach to performing effective leadership. Hence, the variation in their communication styles makes it hard to put their interactional styles in neatly defined masculine and feminine styles of interaction. By bringing out the dynamic and fluid process of identity construction through discourse, the findings of this study also align with the theoretical foundations which underpin this study because the theory of gender performativity and doing gender are premised on the dynamic and fluid notion of identity construction.

#### **4.2. Gender stereotyping about the interactional styles of men and women and the pressure to adhere to norms of appropriacy**

The male and female participants highlighted that the prevailing gender norms and stereotypes about their prescribed interactional styles do have an impact on the way they use language as they enact their leadership roles. In paragraph 2.1 Dr Sonia's response automatically brings in common gender stereotype of learning to '*act-like-a-woman*' and '*not-like-men*', which subtly refers to all the associated expectations of an '*acting-like-a-woman*' approach, for instance, the normative style of interaction where women are expected to be polite and indirect in their communication. Para 2.2, Dr Salma states that women who are in positions of authority and have an assertive style of interaction are labelled as *bull-dyke* with all the negative connotational load. This indicates that when women use assertive discourse strategies to perform

leadership roles, they are at the risk of being stereotyped in derogatory terms, whereas men are spared such stereotyping.

Para 2.4, Dr Asma refers to the role of early socialization in setting different norms of communication for boys and girls. She states that *girls are trained to be humble and polite* as they speak, and they carry this speech style as they perform their professional role, whereas boys are raised *with a notion that they have to be assertive* and that reflects well on their communication style within leadership roles. Para 2.5, Dr Sarah also echoes the same perspective that our training through *socialization and our cultural expectations* do influence the way we use language and the discursive strategies we choose in our personal and professional communication. Para 2.6 Dr Maria elaborates that there are different normative expectations about the use of language as men and women hold positions of authority. The male respondents (para 2.7) also acknowledged the impact of norms and stereotypes on their language stating that they feel *bound* and *controlled* by norms. Dr. Hashim brings out the constraining role of norms as they set standards for *culturally appropriate behaviours*, including the use of language in this case. He asserts that norms are holding us and referring to the power of norms he mentions that *it is not easy to breach the normative patterns*. Para 2.8 Dr Mohsin brings out yet another dimension of the role of norms explaining that if you are a male holding senior position you have to be aware of *gender sensitivity* and you have to *act artificially*, and you cannot *talk freely* with female subordinates and team members. Para 2.9 Dr Wali also reiterates a similar idea that norms do affect your vocabulary as well as the *linguistic choices* we make during the interaction.

**Commentary:** The above analysis highlights that the choices of discursive strategies available to both male and female leaders are not completely free, but they are constrained by the influence of prevailing gender norms and stereotypes. The important finding of the above analysis is that both male and female leaders are not free to exercise their complete individual agency while choosing discursive strategies. They have to negotiate the discursive choices at times at the risk of being stereotyped in derogatory terms. Whereas the responses of females indicate being more constrained by norms and more at the risk of being stereotyped, men also felt the pressure of adhering to the normative expectations of discursive style of male leaders. The analysis also finds that the labelling of certain features of discourse as masculine or feminine features does not have much value as inherent deterministic truth. But it is a result of socialization where males and females are conditioned to adhere to the

normative associations of discursive styles. Here the finding of this paper echoes Butler's (1990) notion of operating within 'a rigid regulatory frame' as she states, 'Gender is the repeated stylization of the body, a set of repeated acts within a rigid regulatory frame' (p, 33). Although agency and power are the basic tenets of Butler's theory of performativity where individuals have agency and power to perform, but this agency is constrained by 'rigid regulatory frame' which refers to the prevailing norms and stereotypes within society.

#### **4.3. Uniformity or Variability in interactional style of men and women holding positions of authority in universities**

The research adopting an essentialist paradigm on language and gender centered on identifying certain linguistic features, as features of feminine style of interaction implying that the discourse features used by women are uniform. However, the social constructivist paradigm centers on flexibility in the linguistic choices according to context and setting, hence leading to variation in the use of language. The interview data also reinforces that all male and female respondents asserted that their interactional style is not uniform, rather, it varies according to the need of settings, people involved, topics, and many other contextual factors.

Para 3.1 Dr Samina elaborates that her communication style differs *in every category, in every situation*. Para 3.2 Dr. Salma associates variation with a range of roles and responsibilities that she has to perform as the head. She says there is variation in her interactional styles *because I wear a lot of hats-so variations as they say*. Para 3.4 Dr. Sarah firmly believes that *you cannot have one yardstick for everything*. She states that being in a position of authority you are dealing *with human beings and they are different*. So, as you perform your leadership role in order to get things done you *need to put, every new strategy*. She asserts that as leaders *you need to be flexible*. Para 3.5 Dr Maria also echoes the same that there is variation in linguistic choices and discursive strategies and in her view, it is *context-driven* which she elaborates later that while performing her leadership role, she chooses between cooperative and assertive discursive strategies depending on the attitude of the team members. She states that if her subordinates are not complying with the deadlines, she chooses to use assertive discursive strategies to get things done on time.

The male respondents also reaffirmed variation in linguistic choices. Dr Shoaib, in para 3.6, elaborates that many factors lead to variation in your linguistic choices: the persons involved, the institution, the subject etc. He firmly posits that the linguistic choices and the interactional styles *cannot be homogenous* in all settings and across various contexts. Para 3.7 Dr Hashim

reinforces the same argument that uniformity in interactional styles is *not possible* as the content and the substance of interactions change.

**Commentary:** The above analysis highlights that discursive enactment of leadership is characterized by flexibility and variation in the discursive styles of male and female leaders. They have to use a wide range of discourse features and linguistic forms to effectively perform leadership according to the needs of context, settings, and the meeting participants.

The finding of this paper reiterates Baxter's (2010) conclusion that men and women in leadership positions are required to have rich linguistic repertoire so that they can use a variety of linguistic means to perform their leadership roles effectively. The above analysis brings the discussion to a significant finding of the current study which demonstrates that since both male and female leaders display variation and diversity in their use of discourse strategies, it reaffirms the function of language as performative. This finding reiterates the performative potential of language as conceptualized by Butler (1990). By highlighting the discursive potential of linguistic means, this finding foregrounds the role of language in discursive performance of leadership.

#### **4.4. Negotiating multiple identities drawing a balance between personal, social, and professional identity**

The participants were asked to reflect on their interactional styles in order to get an insight into how men and women in leadership positions use language as a tool to negotiate multiple identities and how they draw a balance between various aspects of their identity. Para 4.1 Dr Sonia, who holds a very high leadership position, states that women like herself in top leadership roles *end up in double bind – in a catch twenty-two situations* as they try to negotiate between their professional role and their personal identity. In her view, this negotiation involves *learning to shift gears*. As her official role requires her to be assertive, she says she has *learned to say no to things* by asserting authority but as she enters her home, her role changes and so does her interactional style hence she has to *shift the gear*.

In para 4.3, Dr Sarah argues that *you have to be in the middle ground* in order to maintain balance between the *expectations of society being a woman* on one hand and *being a leader* on the other. Since the prevailing models of leadership are dominantly masculine with an authoritative and assertive style of interaction, women in leadership positions have to balance society's expectation of having polite and cooperative communication style in their

identity as homemakers and caregivers. Dr Sarah refers to this balance as between *two different spirits*.

The interesting thing to note is that male respondents did not have much to share about adjusting their style of interaction while balancing between personal and professional identities. This might be due to that fact that they can carry their leadership identity back home and in society because societal expectations give them enough space to be assertive in communication in all manifestations of identity i.e., personal, social, and professional. Interestingly, only one male respondent remarked directly on this question which too is not about his personal effort to negotiate between identities, but generally more about females in leadership roles trying to bring *a work-life balance*. He states that society does not want women *to look like men, dressed like men, talk like that*. While referring to societal expectations, he says that since women are seen as *motherly figures* expected to be *soft-spoken and polite*, even as leaders they are expected to be *kind and polite* to their juniors which requires them to draw a balance between what society expects from them as women and what their professional roles require from them.

**Commentary:** The above analysis indicates that female leaders experience more pressure of drawing a balance between discursive enactment of their gender identity and their leadership roles because both these identities require different discourse patterns. As females, they are expected to employ polite and indirect discourse features whereas their leadership roles at times require them to be direct and assertive in order to accomplish workplace tasks effectively. The traditional model of leadership works on masculine model characterized by being direct, assertive, and autonomous in order to be taken seriously and to get things done (Baxter, 2010); whereas as women they are expected to be polite *motherly figures*. Hence, the study finds that despite having made their way into senior leadership positions, though to a limited extent, women are required to put in extra effort to draw a balance between their gender identity and leadership roles. The study also finds that although politeness, indirectness, and being person-oriented features of feminine discourse style are employed by both male and female leaders as effective discursive strategies, they are still strongly associated with feminine style of interaction, hence, female leaders are under the pressure of being polite and motherly.

## 5. CONCLUSION

This study has highlighted the performative potential of language by analyzing first-hand insights about linguistic diversity and stylistic variation in the use of language by males and females in positions of authority. The

implication of a performative view of language is significant in conceptualizing the notion of identity as constructed and negotiated within discourse and leadership as a 'doing' rather than 'having'. Importantly, the performative conceptualization also points to an element of individual agency. The study has also highlighted the constraining as well as enabling role of gender norms and stereotypes that affects the language choices available to individuals.

The analysis concludes that it is not easy for both males and females to disrupt the normative patterns and expectations about how they are expected to use language while enacting leadership roles. However, as they choose to use the language beyond normative patterns, they run the risk of being stereotyped even in derogatory terms. The study concludes that despite the constraining influence of prevailing norms, language is employed as a flexible and dynamic tool by male and female leaders as they enact their leadership roles in discourse. An important implication is that even in normative social set-ups such as Pakistan, male and female leaders employ language beyond traditionally labelled and defined patterns. Hence, the study concludes that as men and women employ discourse features from both masculine and feminine spectrums; they challenge and contest the prevailing discourse norms.

The study highlighted that gender is not the sole determining factor that accounts for the differences in the language use of male and female leaders. In addition to structural and social factors such as their training and socialization on different patterns and expectations about language use, other important factors such as power and authority have bearing on the communication styles of men and women. Therefore, the implication here is that females can also be as assertive as men if they have the power and authority.

The identity negotiation is a dynamic and context-specific phenomenon accomplished in discourse by drawing on a range of linguistic features and interactional styles. This suggests that it is imperative to pay attention to the contextual factors as male and female leaders discursively negotiate and accomplish their desired identities.

The linguistic and stylistic diversity in the language use of male and female leaders indicates that they are constantly performing masculinity and femininity by employing discourse features normatively coded as masculine or feminine. This implies that masculinity and femininity are not fixed labels or identities that men or women have and they bring into interaction; rather, they come into being within discourse depending on the linguistic features and interactional styles adopted by individuals.

Due to scope and space limitations, this paper has focused on particular thematic areas and settings for investigating the phenomena of identity negotiation and performance. However, the same type of research can be conducted in other workplace settings such as, medical, nursing, and banking. It would also be interesting and worthwhile to carry similar research in male dominated workplace settings such as, army, air force, engineering, and technical departments. The future researchers can also conduct comparative analysis studies focusing on the language use of males and females in formal and informal written and spoken interactions. These potential research areas will develop more holistic and broader understanding of how language is employed as a discursive resource by male and female leaders.

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**ANNEX I**

## Details of Female Interviewees

Sr.#	Gender	Qualification	Designation	Workplace Set-up	Years of Experience	Duration of Interview
1.	Female-1	Ph.D.	VC	All female set-up	30+	30 minutes and 11 seconds
2.	Female-2	Ph.D.	Dean	All female set-up	15+	42 minutes and 31 seconds
3.	Female-3	Ph.D.	Head of Department	All female set-up	10+	56 minutes and 12 seconds
4.	Female-4	Ph.D.	Head of Department	All female set-up	20+	45 minutes and 28 seconds
5.	Female-5	Ph.D.	Head of Department	Mixed gender set-up	15+	29 minutes and 5 seconds
6.	Female-6	MS	Head of Department	Mixed gender set-up	15+	24 minutes and 35 seconds

## Details of Male Interviewees

Sr.#	Gender	Qualification	Designation	Workplace Set-up	Years of Experience	Duration of Interview
1.	Male-1	Ph.D.	Dean	All Male set- up	15+	39 minutes and 25 seconds
2.	Male-2	Ph.D.	Head of Department	All Male set- up	20+	30 minutes and 18 seconds
3.	Male-3	Ph.D.	Head of Department	All Male set- up	10+	31 minutes and 47 seconds
4.	Male-4	Ph. D	Head of Department	All Male set- up	15+	44 minutes and 26 seconds
5.	Male-5	Ph.D.	Head of Department	Mixed Gender set-up	15+	31 seconds and 29 minutes

## **ANNEX II**

### Negotiating identity and performing leadership in Talk: A Gender Based Study

#### Semi-Structured Interview Guide

Name of Participant:

Designation:

Experience

Organization:

Date:

#### **Questions:**

1. Brief Introduction about nature and purpose of research
2. Have you held any administrative/authoritative positions? If yes, can you please explain what type of positions have you held in your professional experience?
3. Do men and women communicate in the same way or are there differences in the interactional styles of men and women? What can you tell from your experience?
4. Can you point out the most prominent similarities/differences in interactional styles of male and female in position of authority? (E.g., direct-indirect, aggressive-conciliatory, authoritative-collaborative, etc.).
5. Every society has norms for appropriate styles of interaction for men and women, do you think these societal norms and stereotypes have impact on your professional interactional styles? If yes, can you briefly explain how?
6. How do you draw a balance between your gender identity and your professional role?
7. Is your style of interaction uniform in all situations (do you always communicate in the same way or is there variation according to the context?
8. If there is variation, then what are the factors leading to variation?
9. How do people respond, when you assert your professional authority through your communication? Do you think you get enough space to assert your authority?
10. Is there anything else that you would like to share?

**ANNEX III**

Table 1. Interactional styles of Women &amp; Men holding position of authority in public sector universities

Para	Name	Gender	Response
1.1	Dr. Sonia	female	She had no role models, female role models to follow. So her attitude was also quite authoritative. And because when you are a woman and you are in a position of authority and you have to show the world that you deserve this position and you have the merit to hold this position. So you are, the role model that you have is male role model.
1.2	Dr. Salma	female	Women have a tendency to look beyond the purely professional what you, you'd call, the human aspect.
1.3	Dr. Afia	female	I might be a bit more submissive, friendly and indirect so I do try to communicate in a way that it is not really directed..... I am careful of offending them- I would be careful about their feelings then I would communicate effectively
1.4	Dr. Asma	female	That is also different within the communication style and language style- if a male is communicating with male is communicating with female. Okay.
1.5	Dr. Sarah	female	I become assertive and I say like this, this is the task, and you don't have any excuse to, refuse it. Right? But sometimes it's more like kind of a coordinating
1.6	Dr. Maria	female	I will not be assertive or challenging in most of the cases and will make everybody have a win-win sort of situation – they won't be aggressive and assertive and out rightly challenging I believe. Just an effort to make everybody work through.
1.7	Dr. Shoaib	male	This is the blessing of being in the educational institution that we are able to, kind of remain polite and be kind you know, of less direct and more, all of those polite politeness expressions. So instead of being kind of authoritative and bossy with the students, with the non-teaching staff, with the teachers - we prefer to be - I prefer to be more polite and because the effect is the same, , the politeness brings better results in the workplace

1.8	Dr. Hashim	male	The first thing that I do is that I don't take my position as something that empowers me to misuse it. I try to do things as for the rules of the university –for everything I consult a rule. And when there is not a rule available for that, I do it with my maximum clarity of mind. And for that, if I'm going to be assertive when I think it's right and it's not existing in the rule, I do it
1.9	Dr. Malik	male	Most of the times my conduct. What you can say in my treatment and my attitude my behavior with my colleagues with my subordinates –that is polite. Sometimes I feel very frustrated, and my tone might be my behavior- it also changes from soft sometimes too hard. It depends on two things One if the deadline is coming very near. And second if there is pressure from higher authorities

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Table 2. Genders stereotyping about the communication styles of men and women and the pressure to adhere to norms of appropriacy

Para no.	Name	Gender	Response
2.1	Dr. Sonia	female	I think we have learned to be women. Yeah. Act like women think professionally not like men, but as independent and empowered women and not feel guilty about that because that is also challenging, we start feeling guilty about that power we have, and we undermine our own power.
2.2	Dr. Salma	female	We have so many stereotypes, which concern professional women, if a woman in an administrative position becomes authoritative, you know, says do this, and don't do that. , again, she's stereotyped into either the bull-dyke kind of a position or if she happens to be unfortunate and unfortunate within quote marks , not to be married , the stereotype is because she's got no family. So, she drives us harder marital position has a lot to do with the way that she's perceived. Yes. And so, you know, if you want, let's say, your colleagues or your juniors to work longer hours or to put in more, the stereotype will be because she has nothing else, herself to do. , therefore she will keep us after hours. So it's a matter more of stereotyping. Nobody's going to stereotype a male administrator.
2.3	Dr. Afia	female	I feel as a woman getting angry and assertive is a very tricky thing - like if I was a man – I can become angry or upset at something – as a woman it is seen as my weakness.... they (men) actually get away with this and with me I am seen as a bad person for getting angry although it's a natural emotion.
2.4	Dr. Asma	female	Norms and stereotypes influence because when you train a girl that you need to be humble you need to be polite.so that politeness that humbleness that will become part of her personality. And that will be there. I mean. I mean. While she will be On the working place. And when the boys they're raised with this notion that they can shout and They can assert or something like that. They will definitely be practicing that thing in workplace.

2.5	Dr. Sarah	female	What I think it is most of the time, our training and the expectations – we don't expect from a woman to be assertive. We expect from her to be caring, loving, don't have much say about her herself. So, it's training, it's reinforcement, it's, the culture, the expectations.
2.6	Dr. Maria	female	We expect different behavioral patterns when women have to be in the position of authority and command. She would have to reassure and reiterate that she's the boss there in that set up.
2.7	Dr. Hasim	male	Yeah, we are bound we are controlled by norms. Yeah, we look into the norms and values, like we say, like norms and values are standards- like there is standard for culturally appropriate behavior and norms is the actual demonstration of that. Like what are expected and unaccepted behavior sometimes I believe that the culture is holding us, and it's not that easy that we think of it breaching it when it's necessary
2.8	Dr. Mohsin	male	Your working relation with a female, we have to observe some norms and some values, we cannot talk freely with them, and We cannot behave freely with them. We have to act artificially because the gender sensitivity - if the female staff or female colleagues are sitting, we have to be very conscience, very apologetic.
2.9	Dr. Wali	male	Norms do affect our, you know the vocabulary, the linguistic choices. Women are expected to be more polite, more, you know I mean that's what we feel that women can get anything done in our country as long as they just shed some tears. Men cannot cry in front of superiors but females would

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Table 3. Uniformity or Variability in interactional Style of men and women holding positions of authority in universities

Para no.	Name	Gender	Response
3.1	Dr. Sonia	female	It differs. I think in every category, in every situation. It differs, the communication differs. The way you communicate in your professional life is different. The communication strategies change, the style changes.
3.2	Dr. Salma	female	Because I wear a lot of hats-so variations as they say, so yes, there's definitely variation in styles of communication, modes of communication, they vary according to the situations. So, it's a case-to-case basis.
3.3	Dr. Afia	female	there is variation I think I do sometime feel that I have been over friendly I need to assert myself but it's easy for me I can assert myself. It depends on the occasion it depends on how things are going.
3.4	Dr. Sarah	female	You cannot have one yardstick for everything, we are dealing with human beings and they are different. So, their working styles are different. So you need to put, every new strategies..... you need to be flexible.
3.5	Dr. Maria	female	there is variation- Yes, it is context driven in most of the cases If you have a team which is supportive and cooperative with you there will be no need to enact authority and to remind people that you are the head and if there is resistance or people are not complying to the deadlines for example then it needs to be reassured even if the head is a male or a female.

- 3.6 Dr. Shoaib male Of course, it varies from person to person. It varies from department to department, from institution to institution, from subject to subject. All depends on who you are..... there is a lot of variation. You cannot say that it's homogenous – no it can't be homogenous.
- 3.7 Dr. Hasim male In every meeting the substance or the content has to decide about it. Right. And we cannot be uniform in all kinds of different interactions It's not possible
- 3.8 Dr. Malik male I think there is variation. As I told you it depends on cases - case to case basis it varies It depends on the situation. It depends on the environment. It depends on your on a work load..... You have to be very polite and sometimes you must be very assertive. So it depends on the situation.
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Table 4. Negotiating Multiple Identities-Drawing a balance between personal, social and professional identity

Para no.	Name	Gender	Response
4.1	Dr. Sonia	female	Yes, we try to do our job. We end up in double bind-catch 22 situation- We want to pull ourselves as professionals and as competent professional at the same time. We have to carry all that baggage with us. So it's a very delicate balance that you have to deal with..... I think we have to learn to shift gears.... In this office I have to be assertive. I have learned to say no to things. I have learned to take decisions Quickly.
4.3	Dr. Afia	female	Sometimes I struggle with it, I feel that being myself is very important to me personally so I have managed to kind of make it work for me- with what I have somehow within those barriers- I do actually -
4.5	Dr. Sarah	female	Having two different identities of a homemaker being the traditional, feminine, you know, feminine aura and to a person who is working outside the home and doing, having the work identity, do they go side by side? Do they facilitate each other; do they mitigate each other? How to balance that. Then what I found, and I usually have this thing in myself also what we have to do is you have to balance this on the bases of the personality that you..... have. Personality development of the person is very important to balance the both roles of work and family and being feminine or being masculine kind of things. You will need to be more, and you need to be more in the middle ground for doing both kinds of things. So it's a balancing things. If it was like how to balance would be like two different spirits, the expectations of the society being women- and the expectation of the society being masculine,
4.7	Dr. Shoaib	male	Dr. Shoaib of course we have to bring this work life balance - the society and workplace place balance, and little many things like you don't want women like the society doesn't want them to look Like men - dressed like men talk like that, there are certain things that might be the expectations like that. –so that is a compulsion from the society-and

That is part of your psyche as well, you're making as well because you have learned to speak that way for example women are considered soft spoken by many, and they remain because they are sometimes the things that are psychological like women motherly figures so they are always particularly if it's the juniors will be addressing, they would definitely be kind and soft

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## Happiness, Gratitude, Life Satisfaction, and Life Orientation among Working and Non-working Individuals

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### Abstract

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*The study was conducted to find differences among working and non-working individuals regarding happiness, gratitude, life satisfaction, and life orientation. Convenient sampling technique was used to collect the data. The sample consisted of 300 individuals; 150 were working and 150 were non-working individuals. Out of 150 working participants, 75 participants were bankers and 75 were teachers. The non-working sample consisted of 75 males and 75 females. Oxford Happiness Questionnaire, The Gratitude Questionnaire-six item form (GQ-6), Satisfaction with Life Scale and Life Orientation Test-Revised were used to measure happiness, gratitude, life satisfaction, and life orientation respectively. Correlation unveiled that happiness, gratitude, life satisfaction, and life orientation were positively correlated. Independent sample t-test showed that working individuals were happier, more grateful, and more satisfied with life as compared to non-working individuals while non-working females showed higher levels of gratitude, satisfaction, and positive life orientation than non-working men. Further independent sample t test indicated that bankers were happier than teachers. Multiple regression analysis showed that happiness and gratitude predict life satisfaction.*

**Keywords:** Happiness, Gratitude, Life satisfaction, Life orientation

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## 1. INTRODUCTION

Happiness is defined as hedonia and eudemonia (Ryan & Deci, 2001). Hedonia means the presence of pleasant and the absence of unpleasant feelings. Eudemonia is defined as subjective feelings of personal fulfillment that arise when our actions have reflected the highest potentials (Dubner, 2013). Gratitude is a social emotion that arises when we realize that others' actions are favorable to us (Fox *et al.*, 2015).

Shin and Johnson (1978) argued that according to one's settled criteria for success, every individual's assessment of his or her quality of life on a global level is called life satisfaction. Life orientation (dispositional optimism and pessimism) is the degree of expectancy towards any positive or negative end result or event happening in our lives (Scheier & Carver, 1985). Both optimism and pessimism are heritable but literature suggests that certain environmental factors such as peer popularity, self-esteem (Fischer & Leitenberg, 1986), interaction with parents, parenting styles, (Scheier & Carver, 1993), teachers, media and socioeconomic status (Forgeard, & Seligman, 2012), family structure, familial relationships, and neuroticism play a special role in utilization of these tendencies (Bates, 2015).

One of the studies highlighted the value of optimism determining life satisfaction in students (Yalcin, 2011). The results of the study revealed that social support provided by family of students, faculty members, as well as optimism shown by students were strong predictors of life satisfaction. Research by Rathore *et al.* (2015) was conducted to find relationship among satisfaction of life and approach towards life (life-orientation) and its impact on doctors' well-being. Results indicated that psychological well-being among doctors was led by life orientation and life satisfaction. Optimism has been also found to increase physical well-being and improve mental health (Conversano *et al.*, 2010). Emmons and McCullough (2003) conducted research with the goal to find out the impact of practicing gratitude. The results showed that those who practiced gratitude experienced optimism in many areas of their life, especially health and exercise. Wood *et al.* (2008) wanted to see whether gratitude predict change in life satisfaction. The results of this study show that a positive correlation exists between gratitude and life satisfaction. Diaz *et al.* (2016) explored the topics of positive psychology such as practicing gratitude, showing satisfaction towards life, and providing aid/help to others. While controlling for financial satisfaction, researchers found a direct linkage among gratitude and life satisfaction. In the Mexican adult population researchers found that gratitude is directly related with life satisfaction and helping other

people at different income levels. Researchers also observed connections between prosperity shared by employees and business freedom on life satisfaction as indicated by self-employed people. The findings show that in countries with strong institutions offering business autonomy and an increase in shared prosperity, the self-employed people exhibit higher life satisfaction (Wolfe & Patel, 2018). The study by Matud *et al.* (2014) is governed to check whether self-identification in gender roles had any impact on life satisfaction of males and females. To predict life satisfaction of males, self-esteem plays an important role and to indicate life satisfaction of females, social support plays an important role. Men who possess high self-esteem have higher rate of life satisfaction and women who receive more social support are more satisfied with life. One study states that life satisfaction and optimism is higher in working class individuals (Sahai & Singh, 2017).

### **1.1. Goal of the study**

Constructs such as happiness, gratitude, life satisfaction, and life orientation have been measured in western societies the most. The goal of current study is to measure happiness, gratitude, life satisfaction, and life orientation among working and non-working individuals of Pakistan. The major goal of this study is to find out whether the working class tends to be happier than non-working; also, we want to see whether there is difference between different categories of working-class participants regarding these constructs or not, such as bankers and teachers. Another goal of the study is to see whether any difference exists between non-working males and females with respect to happiness, gratitude, life satisfaction, and life orientation. After emergence of positive psychology, different researchers studied each attribute mentioned above as a whole or in different combinations but nowadays there is a strong wave to study four of them at the same time such as the impact of happiness and gratitude on life satisfaction and life-orientation and interconnection between the same factors.

## **2. METHOD**

### **2.1. Objective**

To examine happiness, gratitude, life satisfaction, and life orientation among working and non-working individuals.

## 2.2. Hypotheses

1. Working individuals are happier, they pay more gratitude, experience more life satisfaction, and have a positive life orientation than non-working individuals.
2. Bankers experience more happiness, gratitude, life satisfaction, and life orientation than teachers.
3. There is a positive correlation between happiness, gratitude, life satisfaction, and life orientation.
  1. Happiness and gratitude predict life satisfaction.

## 2.3. Research Design

Cross-sectional research design was utilized in the study.

## 2.4. Sample

Convenient sampling technique was used to collect data. The sample consisted of 300 (N=300) individuals from Islamabad; 150 (n=150) were working individuals and 150 (n=150) were non-working individuals, age ranged from 30-40 years. Out of 150 working individuals 75 participants were bankers; (men=37, women=38) and 75 were teachers (men=38, women=37). Criteria for non-working individuals consisted of those participants who were educated but not employed in any government or private organization. Non-working criteria consisted of 75 men and 75 women with age ranges from 30-40 years.

## 2.5. Instruments

**Oxford Happiness Questionnaire.** Oxford Happiness Questionnaire (Hills & Argyle, 2002) was used to measure happiness. It consists of 29 items and has a 6-point rating scale ranging from 1= strongly disagree to 6= strongly agree. It is a compact instrument and easy to administer. Its reliability is .81. By dividing total obtained score with total number of items, the raw score is achieved which is in the range of 1-6. Scores lying between 1-2 show that one is not happy, 2-3 shows one is somewhat unhappy, 3-4 shows not particularly happy, 4 indicates somewhat happy or moderately happy, 4-5 shows rather happy or pretty happy, 5-6 shows one is very happy, and 6 indicates that one is exceptionally happy.

**The Gratitude Questionnaire-six item form (GQ-6).** The Gratitude Questionnaire-six item form (GQ-6) (McCullough, Emmons & Tsang, 2002) was used to measure gratitude. The Gratitude Questionnaire-Six-Item Form (GQ-6) is a six-item self-report questionnaire developed to measure individual

differences in the willingness to experience gratitude in daily life. It is a 7-point likert rating scale (where 1 = strongly disagree and 7 = strongly agree). The value of Cronbach's alpha estimates for this scale is .84, proposing that the scale has a moderate level of internal consistency.

**Satisfaction with Life Scale (SWLS).** Satisfaction with Life Scale Pavot & Diener (2013) was used to measure life satisfaction among working and non-working individuals. The SWLS is a short 5-item instrument designed to measure global cognitive judgments of satisfaction with one's life. It is used to measure the life satisfaction component of subjective well-being. The SWLS is a 7-point likert style response scale. The coefficient alpha for the scale is .89, showing that the scale has high internal consistency.

**Life Orientation Test (Revised).** Life Orientation Test-Revised as Scheier, Carver & Bridges (1994) was used to measure life orientation. The Life Orientation Test (LOT) was built to see individual differences in generalized optimism versus pessimism. The LOT-R is a brief and easy-to-use measure. It is comprised of 6 items. The value of Cronbach's alpha for the entire of the scale was .78, proposing the scale has moderate level of internal consistency.

## **2.6. Procedure**

To conduct the present study, different banks and universities of Islamabad were visited. Bank managers were approached and asked for their permission to let the employees fill the questionnaires. Data was collected from 8-10 banks. When different universities of Islamabad were visited, permission was taken from administration department to perform the test/questionnaires. Participants were handed over booklet of questionnaires including Oxford Happiness Questionnaire, The Gratitude Questionnaire-six item form (GQ-6), Satisfaction with Life Scale (SWLS) and Life Orientation Test (Revised) in order to assess their happiness, gratitude, life satisfaction, and life orientation. Consent of participants was taken beforehand and confidentiality of their names and responses were kept intact. Verbal instructions were also provided to respondents along with written directions to respond to questionnaires.

## **3. DATA ANALYTIC PLAN**

By using Statistical Package for Social Sciences (SPSS version 25), descriptive and inferential statistics of the data were analyzed. Psychometric properties (i.e., reliability coefficient of instruments) and descriptive properties

(i.e., means and standard deviations) were calculated. Inferential statistics (i.e., bivariate correlation, regression analysis and t-test analysis) were used to measure correlation, regression, and mean differences.

#### 4. RESULTS

Table 1 shows the alpha coefficients, mean, standard deviation, skewness and kurtosis. Findings also show good reliability estimates, suggesting that all the scales are internally consistent.

Table 2 shows that life satisfaction is significantly positively associated with happiness, gratitude, and life orientation. Life orientation is significantly positively correlated with gratitude and happiness while gratitude has a significant positive correlation with happiness.

Table 1. Descriptive Statistics for Happiness, Gratitude, Life satisfaction and Life Orientation (N=300)

Variables	<i>N</i>	$\alpha$	<i>M</i> ( <i>SD</i> )	Min-Max	Skew	Kurt
Happiness	29	.89	98.56 (8.89)	29-174	-.18	-.73
Gratitude	06	.78	29.12 (3.26)	06-42	-.32	-.46
Life satisfaction	05	.82	21.34 (6.35)	05-35	-.19	-.85
Life orientation	06	.85	17.91 (8.44)	06-30	.13	.13

Table 2. Inter-Correlation among Study Variables (N=300).

Variable	1	2	3	4
1 Life satisfaction	-	.03**	.37**	.32**
2 Life orientation	-	-	.26**	.10**
3 Gratitude	-	-	-	.08**
4 Happiness	-	-	-	-

\*\* $p < .01$ .

Table 3 shows significant difference between working and non-working individuals on life satisfaction, life-orientation, gratitude, and happiness. It is indicated from the mean column that employed people are happier ( $M=4.04$ ,  $SD=.67$ ), they practice more gratitude ( $5.12$ ,  $SD=1.09$ ), are more life oriented ( $M=2.59$ ,  $SD=.69$ ) and experience more satisfaction ( $M=4.76$ ,  $SD=1.42$ ) as compared to non-working individuals who score low on happiness ( $M=3.76$ ,  $SD=.51$ ), gratitude ( $M=4.78$ ,  $SD=.80$ ), life orientation ( $M=2.51$ ,  $SD=.59$ ) and life-satisfaction ( $M=4.06$ ,  $SD=1.22$ ).

Table 3. Mean, Standard deviation and t-value of Working and Non-working Individuals on Study Variable (N=300).

Variables	Working (n=150)		Non-working (n=150)		t (298)	p	95%CI		Cohen's d
	M	SD	M	SD			LL	UL	
Life Satisfaction	4.76	1.42	4.06	1.22	4.56	.00	.39	1.00	.39
Life Orientation	2.59	.69	2.51	.59	1.03		.06	.22	.00
Gratitude	5.12	1.09	4.78	.80	3.00	.00	.11	.55	.35
Happiness	4.04	.67	3.76	.51	4.05	.00	.14	.41	.78

Note: LL= Lower Limit, UL= Upper Limit, CI= Confidence Interval.

Table 4. Means, Standard deviation, t-test value of Bankers and Teachers on Study Variable (N=150).

Variables	Bankers n=75		Teachers n=75		t (148)	p	95%CI		Cohen's d
	M	SD	M	SD			LL	UL	
	Life Satisfaction	4.70	1.44	4.81			1.40	.48	
Life Orientation	2.54	.70	2.63	.67	.76	.44	-.31	.13	0.04
Gratitude	5.20	1.15	5.04	1.03	.86	.38	-.19	.51	0.14
Happiness	4.23	.80	3.85	.43	3.5	.00	.17	.58	0.59

Note: LL= Lower Limit, UL= Upper Limit, CI= Confidence Interval.

Table 4 reveals non-significant differences between bankers and teachers on life satisfaction, life orientation, and gratitude. There is also a significant difference among bankers and teachers on happiness. It is evident from the mean column that bankers feel more happiness (M=4.23, SD=.80) as compared to teachers (M=3.85, SD=.43).

Table 5. Linear Regression Analysis showing Happiness and Gratitude as Predictor Variables of Life Satisfaction (N=300).

Predictor variable	B	SE	B	T	p
Happiness	.41	.13	.18	3.06	.002
Gratitude	.39	.08	.28	4.60	.000

R=.40, R<sup>2</sup>=.16, F (2, 297) =29.19, p<0.05.

Table 5 shows that happiness and gratitude significantly predict life satisfaction. There is 16% change in the life satisfaction by happiness and gratitude, F (2, 297) = 29.19, p< 0.05, R<sup>2</sup> =.16.

Table 6. Means, Standard deviation, t-test value of Non-working Male and Female for study variable. (N=150)

Variables	Male n=75		Female n=75		t (148)	P	95%CI		Cohen's d
	M	SD	M	SD			LL	UL	
Life Satisfaction	3.56	1.04	4.56	1.19	5.45	.00	-1.35	-.63	0.89
Life Orientation	2.34	.522	2.68	.611	3.73	.00	.11	.45	0.52
Gratitude	4.51	.79	5.06	.72	4.45	.00	-.79	-.30	0.72
Happiness	3.68	.47	3.83	.54	1.74	.08	-.30	.01	0.28

Note: LL= lower limit, UL= upper limit, CI= confidence interval.

Table 6 shows significant difference between non-working male and female on life-satisfaction, life-orientation, and gratitude. It is evident from the mean column that non-working females experience more life satisfaction (M=4.56, SD=1.19), positive life-orientation (M=2.68, SD=.61) and gratitude (M=5.06, SD=.72) as compared to non-working males who have less life satisfaction (M=3.56, SD=1.04), orientation towards life is passive (M=2.34, SD=.52) and are less grateful (M=4.51, SD=.79).

## 5. DISCUSSION

In everyone's life many factors affect their emotions such as happiness and satisfaction with their life. Some people, despite being unhappy with their lives, are optimistic; on the other hand, many people have blessings but are unaware of them and somehow feel empty and are ignorant of their good fortune. People who are happy not necessarily opt to pay gratitude and it is not necessary for them to have a positive orientation towards life. But many people are happy and satisfied with life even though their lives are far from perfection. One cannot say that people become happy with wealth, status, age or satisfaction in life. But some factors which could affect their life and overall well-being are socioeconomic status, age, gender, religion, education, to name a few. Some of these factors are investigated through this research such as status (working or non-working). The effects of these demographic variables are seen on some areas of an individual's life such as happiness, gratitude, life satisfaction, and life orientation.

There is a positive correlation between happiness, gratitude, life satisfaction, and life orientation. A Mexican study noticed the influence of gratitude on satisfaction of Mexican adults (Diaz, Meixueiro & Bench, 2016). Another research sprouts that more happiness leads to more satisfaction in life (Martin, Perles & Canto, 2010).

It was suggested that happiness and gratitude influence life satisfaction. Results show the prediction of life satisfaction by happiness and gratitude. Happiness and gratitude significantly predict life satisfaction and correlated positively with life satisfaction, Froh *et al.* (2008) also reported the positive relationship between happiness, gratitude, and life satisfaction.

It was assumed that the working class is happier; exhibit more gratitude, are more satisfied with life and have better orientation towards life than non-working participants. Results revealed significant differences between working and non-working class and showed that working individuals are happier and practice more gratitude than non-working individuals. Happiness and gratitude are inter-dependent and neither can be achieved alone; hence, if people practice more gratitude in their lives, they find more sources to make themselves happy. A study also revealed that the more gratitude showed by people, the more they are satisfied and judge their lives in positive aspects (Wood, *et. al.* 2008). Results also show that working individuals are more satisfied with their lives than non-working individuals. Sahai and Singh (2017) argued that employees working in different institutes of India are more satisfied with their lives than unemployed individuals.

It was also assumed that bankers experience more happiness, gratitude, life satisfaction, and life orientation than teachers. Results indicated that bankers scored higher on happiness than teachers. One of the reasons behind such result might be that working in banks would be less preferable by some parents so they would prefer a safe job in terms of job environment especially for their daughters such as teaching, here we can also assume that bankers have much more autonomy and are most likely to do this job because they are happy to do so rather than being forced or as an option. They have a more sophisticated and soothing environment to work in which affects their mood and level of happiness; on the other hand, most teachers do not enjoy the luxuries such as air conditioners (AC) or heating system in their rooms and offices. Another reason might be the differences in nature of both jobs. Teachers are more realistic and honest and want to portray what is truth to society whereas bankers might have given favourable answers because factors such as social desirability might have played a role in their responses. Another reason might be that bankers are only responsible for a job they are being assigned to, whereas teachers also participate in extracurricular activities with students. There must be some other factors which would have led to such responses from teachers as well as bankers that need to be addressed in the future.

Table 6 revealed notable differences in life satisfaction, gratitude, and life orientation. It was noticed that females although non-working individuals, are more satisfied with their lives, they pay more gratitude and have a positive orientation towards life. In the west, it has been uncovered by Powell and Craig (2015). that non-working females will more likely to suffer than non-working males. Our results show a cross cultural difference here. In Pakistan, females are likely to be dependent on their male family members. Such females know that they will get a share even if they do not work and when they are given facilities, they pay gratitude as their requirements get fulfilled. Religion may also play an important role in affecting the results. In Quran Allah says “Men are caretakers of women, since Allah has made some of them excel the others, and because of the wealth they have spent. So, the righteous women are obedient, (and) guard (the property and honor of their husbands) in (their) absence with the protection given by Allah.” No matter what and they (men) are most likely to be the one working outside. This somehow puts women at ease and makes them feel satisfied. It was reported by the interviewees themselves so, the difference being shown in this section provides other factors that can also affect happiness, gratitude, life satisfaction, and life orientation of non-working males and females in Pakistan.

## 6. LIMITATIONS AND SUGGESTIONS

- The responses might be biased due to the factor of social desirability and participants might have given those responses that are more acceptable in society while hiding their inner tendencies. Effect of social desirability and biases of responses can be minimized by conducting a qualitative research in which in-depth information can be taken by asking indirect questions.
- Data was collected through convenient sampling technique so it might be possible that each member of population did not get an equal chance to be selected as a part of sample. The data should be collected through random sampling so that each and every member of population can get an equal chance to be selected as a part of sample.

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## Perceived Psychological Stress, Acting out Tendencies, and its Relationship with Judgment of Police Constables in Punjab, Pakistan

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### Abstract

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*The present study aims to explore the relationship between perceived psychological stress and acting out tendencies, and their effect on moral judgment among police constables in Punjab, Pakistan. The correlational study was conducted in five cities of Punjab, Pakistan. Participants were recruited from Lahore, Narowal, Sheikhpura, Kasur, and Farooq Abad. The police constables, who completed the study inclusion criteria, were approached after taking their written and verbal consent. The perceived psychological stress (Cohen et al. 1983, 1983) translated in Urdu by Kausar & Tahir (2013) was used to assess the stress level of an individual. The aggression test (Fulton et al., 1998) was used to assess the acting out tendencies among police constables of Punjab, Pakistan. The Moral Judgment Test (Georg Lind, 1999) translated in Urdu by Liaqat (2011) was used to assess moral reasoning while presenting different scenarios. The results were analyzed using Statistical Package for Social Sciences (SPSS). It revealed that all police constables have psychological stress in Punjab, Pakistan but significant relationship exists between age and moral judgment in police constables. The current study sheds light on the psychological stress that police constables face due to their job demands and different challenging situations.*

**Keywords:** Stress, Psychological Pressure, Morality, Acting Out Tendencies, Anger, Police Constables, Pakistan

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## 1. INTRODUCTION

Police officers perform a highly stressful and dangerous duty that involves a complex set of environmental, psychosocial, and health risks (Arias *et al.*, 2008) as maintaining law and order in any country is a difficult task (Collins & Gibbs, 2003). Worldwide, the duty of police constables is considered very dangerous and involves physical and emotional risks (Arnetz *et al.*, 2013) It was observed that different personality characteristics are associated with the police constables by the public to portray their images such as authoritarianism, cynicism, and aggression due to different job responsibilities (Zapolski *et al.*, 2018). Research indicated that due to hectic routine, police constables suffered from distress and burn out tendencies (Rasheed *et al.*, 2018). According to a survey, due to continuous work in a stressful environment, one in five police officers feels frustrated and has anger or acting out tendencies (Horrigan, 2016). According to Dr. Muhammad Shoaib Suddle, “It was general image exhibits of whole department of police by public in Pakistan that ‘Polic[ing] was designed to be a public-frightening organization, not a public-friendly agency” (Ullah *et al.*, 2016).

Police violence is described as excessive use of force (Violanti *et al.*, 2014). In Pakistan, acting out tendencies among police constables are on the rise that include simple verbal aggressive comments to physically violating someone’s boundary (Zubair & Khan, 2014). Due to corruption allegations, highlighted malpractices, acting out tendencies, and less emphasis on good deeds, police constables have become the cause of disrespect of their department in Pakistan (Ullah *et al.*, 2016). A survey of both rural and urban areas by Gallup, Pakistan, revealed that 24% of Pakistanis themselves or the people in their neighbourhood have no trust in police, 49% have very little trust in police and 27% have significant trust in police (Saeed, 2014). This data indicates that police failed to serve public and continued to serve those in power (Imam, 2011). The same influential people seem to try to give legitimacy to violent actions and decrease moral judgment of police force by motivating them into such activities for personal or political gains (Zubair & Khan, 2014). The current study will help understand the reasons that might become the cause of lack of morality and what forces lead towards acting out behaviours.

In Pakistan, it is noted that psychologically exhausted police officers develop maladaptive behaviour and acting out tendencies towards others, either family or public (Humayon *et al.*, 2018). The aim of this study is to explore the relationship between police constables' stress and acting out tendencies, that might affect the moral judgment in police constables as they are confronted

with moral dilemmas in the course of their job. This study helped us understand the stress level of police constables in different cities and provided us with the direction to explore more underlying stress factor of police and their effects on their social morals. ‘The exploration of such factors will help to improve their mental health and eventually become the cause of betterment of society.

## **2. THEORETICAL FRAMEWORK OF THE STUDY**

The theoretical framework of the study contains two models:

### **2.1. System Model of Stress (SMOS)**

This model focusses on “System”. The model contains at three systems which become the cause of stressors *1*) open system: constantly interacting with the environment; *2*) appraisal: when stressors attack, the process of appraisal starts includes detection identification *3*) responses: the individual copes with the stressors by bringing certain important and needful changes in his responses; they can be psychological, physiological, and behavioural. The present study helps to explore the stress level in Punjab, Pakistan. The pressure of the police constables must be tackled if proper models are developed and implemented in the system.

### **2.2. Rest model of moral development**

The six stages of moral reasoning, developed by Rest (1979), are based on Kohlberg’s development theory. Each of these stages' schemas includes representative characteristics. *Stage 1*: Obedience, *Stage 2*: Instrumental Egoism & simple Exchange, *Stage 3*: Interpersonal concordance, *Stage 4*: Law and duty to the social order, *Stage 5*: Societal consensus, *Stage 6*: Non-arbitrary social cooperation

## **3. METHOD**

The current study will be conducted in Pakistan to explore the relationship between Perceived Psychological Stress and Acting Out tendencies, and its effect on moral judgment among police constables of Punjab, Pakistan.

### 3.1. Study Design

The Correlational research design was used to study perceived psychological stress, acting out tendencies and its relationship on morality among police constables. The data was collected by purposive sampling technique. The sample of  $N=250$  police constables were included in the study. The participants ( $N=50$ ) were taken from the District jail of Sheikhpura, ( $N=50$ ) were taken from District jail of Lahore, ( $N=50$ ) were taken from District jail of Kasur, ( $N=50$ ) were taken from District jail of Narowal, ( $N=50$ ) were taken from District jail of Farooq Abad.

### 3.2. Study Setting

Permission was taken from five district jails of Punjab that included Sheikhpura, Lahore, Narowal, Farooq Abad, and Kasur. Consent was taken from the participants before the study.

#### *Inclusion Criteria:*

Police constables will be included if they:

- are aged 18 and above
- are able to give written informed consent
- are able to participate in the study on volunteer basis
- have been on duty at least on one occasion for the safety of the public

#### *Exclusion Criteria:*

Police constables will be excluded if they:

- are not able to provide full consent
- present a diagnosed physical or intellectual disability as it can may become the cause of psychological stress among police constables

### 3.3. Assessment Measures

Following instruments were used to collect data for the study:

#### 3.3.1. Perceived Psychological Stress (Cohen, 1983)

Perceived psychological stress was developed by Sheldon Cohen (1983). The scale was translated by Amna Tahir and Prof. Rukhsana Kausar

(Institute of Applied Psychology, University of the Punjab, Lahore, Pakistan) in 2013. The 14-item scale rates from “0 to 4” in which 0 means Never, 1= almost never, 2= sometimes, 3 means almost frequent and 4 means very frequently. The higher score of the scale shows higher stress levels in the participants. The reliability of the scale in the present study was .61.

### **3.3.2. Aggression Test (Fulton *et al.*, 1998)**

Aggression Test was used to measure the acting out tendencies in the police constables participating in the present study. The psychological measure specifically measures the overt aggression tendencies in the individuals. The Urdu translated version of the scale was used in the present study. The reliability of the scale was recorded at .61.

### **3.3.3. Moral Judgment Test (Georg Lind, 1999)**

The Moral Judgment Test has been constructed by Lawrence Kohlberg (1964) to assess a subject's moral judgment competence. It measures the subject's moral ideas and attitudes. The Urdu translated version was used in the present study (Liaqat, 2011). The scale consisted of two moral dilemmas in the form of two very brief stories (euthanasia dilemma and workers' dilemma). Each dilemma provides a fictitious but a real-life situation on which a decision is made by the characters of a story and participants rate how much they agree with the solution on a 7-point scale (-3 to +3).

## **4. PROCEDURE**

Ethics approval was sought from the Ethical Board of Government College University, Lahore. After approval of the University Board, permission processes were completed from all the authors before using the assessment measures in both English and Urdu. At the third level, permission processes were started from all district jails on the reassurance that the data will be kept anonymously and be kept confidential, and it will only be used for research purposes. Researchers assessed the eligibility of the police constables by using inclusion/exclusion checklist as the screening instrument. The purpose of the study was explained to the participants and a participant information sheet was provided to them both in English and Urdu languages. Written consent was taken from all eligible and volunteer participants. Consent process and verbal consent was recorded for those who are unable to read and write. The police constables who showed restrictions during administration of assessment

measures due to the associated stigma about mental health were briefly psycho-educated and the researchers elaborated the purpose of the study again.

## 5. RESULTS

The demographic information of the sample includes gender, education, family system, age, and marital status. The sample consists of 250 police constables from five different cities of Punjab province. Qualification categories of participants consists of nil qualification ( $f=3$ ,  $\% = 1.2$ ), matriculation ( $f=140$ ,  $\% = 56.0$ ) and graduate ( $f=107$ ,  $\% = 42.8$ ). Family system of participants consists of nuclear ( $f=139$ ,  $\% = 55.6$ ) and joint ( $f=111$ ,  $\% = 44.4$ ). The marital status shows that most police constables are single ( $f=147$ ,  $\% = 58.8$ ) and less participants are married ( $f=103$ ,  $\% = 41.2$ ). The age categories of participants divided into two subgroups, young participants ( $f=176$ ,  $\% = 70.4$ ) and middle age participants ( $f=74$ ,  $\% = 29.6$ ). The income of participants has been divided into two categories ( $f=20.8 > 50,000$ ,  $79.2 < 50,000$  respectively).

Table 1. Demographic characteristics of the sample

Demographics	F	%
Gender		
Male	250	100.0
Age		
Young	176	70.4
Middle	74	29.6
Education		
Illiterate	3	1.2
Matriculation	140	56.0
Graduate	107	42.8
Family System		
Nuclear	139	55.6
Joint	111	44.4
Marital Status		
Single	147	58.8
Married	103	41.2
Income		
Less than 50,000	52	20.8
More than 50,000	198	79.2

Note: f= frequency, % = percentage.

It was hypothesized that there will be a significant relationship between income, perceived psychological stress, and moral judgment in police constables.

Table 2. Correlation matrix of Income, Perceived Psychological Stress, and Moral Judgment (N=250)

Variables	1	2	3
1. Income	-	.14*	.28**
2. Perceived Psychological Stress	-	-	.20**
3. Moral Judgment Test	-	-	-

Note = \* $p < 0.05$ , \*\* $p < .001$ .

Results of Pearson product moment correlation indicated that there is a positive correlation between income and perceived psychological stress ( $r = .14^*$   $p < .05$ ). Moreover, there is significant correlation ( $r = .28$ ,  $p < .001$ ) between income and moral judgment in police constables.

It was hypothesized that the higher the age the higher will be acting out tendencies (AOT) and Moral judgment (MJT) in police constables.

Table 3. Correlation matrix of Age, Acting out tendencies & Moral Judgment in Police constables (N=250)

Variables	1	2	3
1. Age	-	-.06	-.39**
2. Acting out Tendency	-	-	.25**
3. Moral Judgment	-	-	-

Note = \* $p < 0.05$ , \*\* $p < .001$ .

The result indicated that age is negatively correlated to moral judgment ( $r = -.39$ ,  $p < .01$ ) in police constables. It also indicated that age was not significantly related to acting out tendencies ( $r = -.06$ ,  $p < .05$ ) in police constables. Moreover, acting out tendency is significantly correlated ( $r = .25$ ,  $p < .05$ ) with Moral Judgment in police constables.

It was hypothesized that perceived psychological stress and acting out tendencies are likely to predict moral judgment among police constables.

Table 4. Simple Linear Regression Predicting Moral Judgment (MJT) from Perceived Psychological Stress (PPS) & Acting out Tendencies (AOT) in police constables (N=250)

Variable	B	SE	B	p	Moral Judgment	
					95% CL	
SE	-25.9	7.0		.00	.39	-12.0
Perceived Psychological Stress	.70	.23	.17	.00	.23	1.1
Acting out Tendency	1.2	.31	.23	.00	.62	1.8
R <sup>2</sup>	.31					
R2	.09					
F	13.3					

Note: \*p < .05, CI = Confidence Interval.

The results indicated that both perceived psychological stress (PSS) and acting out tendency (AOT),  $F(2.247) = 13.3, p < .001$  are the positive predictor of moral judgment (MJT) in police constables. The results indicated that the variance R2 is significantly accounted ( $R2 = .09$ ), which emphasizes the accountability for 90% variance in the model.

It was hypothesized that age and income are likely to predict moral judgment among police constables.

Table 5. Simple Linear Regression Predicting Moral Judgment from Age and Income (N=250)

Variable	B	SE	B	p	Moral Judgment	
					95% CL	
SE	-.42	7.7	-.53	.58	-19.5	10.9
Age	-1.2	.16	-.42	.00	-1.5	-.93
Income	.002	.00	.38	.00	.001	.003
R <sup>2</sup>	.50					
R2	.25					
F	43.0					

Note: \*p < .05, CI = Confidence Interval.

Results indicated that the simple linear regression determined whether age and income are predictors of moral judgment. The results indicated that both age and income are significant predictors of moral judgment (MJT),  $F(2.247) = 43.0, p < .001$  in police constables. The results indicated that the variance R2 is significantly accounted ( $R2 = .25$ ), which emphasized the accountability for 25% variance in the model.

It was hypothesized that there will be a difference in perceived psychological stress, acting out tendencies, and moral judgment by five cities of Punjab, Pakistan ( $N=250$ ).

Table 6. One Way Analysis of Variance of Perceived Psychological Stress, Burn-out (Exhaustion & Disengagement), Acting out Tendency, and Moral Judgment by five cities ( $N=250$ )

Variables	Sheikhupura		Lahore		Narowal		Kasur		Farooq Abad		<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
PSS	26.1	5.8	27.6	5.7	22.2	5.0	25.3	6.0	27.8	5.1	.000
Acting out tendencies	11.0	3.9	12.6	4.5	12.0	4.4	11.3	4.0	13.5	5.2	.040
Moral judgment Test	-5.9	9.3	22.4	26.0	-4.2	7.9	-4.7	-9.2	28.5	27.0	.000

The results indicated that there is a significant difference in perceived psychological stress (PSS), acting out tendency, and moral judgment in police constables living in different cities. Further, Post Hoc analysis indicated that perceived psychological stress is significantly higher among the police constables of the five cities. Moreover, results showed that the Acting out tendencies are significantly different in the five cities of Punjab, Pakistan.

## 6. DISCUSSION

The objective of the study was to explore perceived psychological stress, acting out tendencies and its relationship on moral judgment among police constables. The descriptive analysis indicated that the majority of the police constables was between the ages of 18 -35 years, with educational qualification till matriculation, and most of them were living as part of joint family system. The sample was drawn from five cities of Punjab, Pakistan.

The results of the study concluded that there is a positive correlation of income with both psychological stress and moral judgment among police constables. According to the system model of stress (SMOS), psychological stressors or physiological demands are interlinked and interrelated with each other (Lumsden *et al.*, 2019) and it has been revealed that physiological needs such as high living demands, job pressure, and maintaining morality become the cause of psychological stress among high income police constables. Furthermore, a study by Narweez (1999) examines that the police constables do not prefer money to their morality. Thus, the results suggest that if the

income increases then stress level and morality both increase to fulfil the responsibilities either towards family or towards the society.

The results also concluded that age has no significant relationship with acting out tendencies and it has also been shown in the studies of criminal activity that acting out tendencies can be developed in any individual from preadolescence or early adolescence (Juvenile crime, 2001) and its chances to develop in later age decrease. Furthermore, Violanti (2006) also investigated that the police constables will be able to understand the system of the department with the passage of time and it might affect their morality according to their job demands.

It is also predicted in the current study that the age and income are positive predictors of moral judgment in the police constables of Punjab, Pakistan, as the demands of promotion, high ranks, and decent salary are associated with the satisfaction of police constables (Andreou *et al.*, 2011). Different factors such as negative media coverage, public criticism, workload, departmental pressures, and poor salary were highly associated with the age and years they spend in service of police departments (Xavier & Prabhakar, 2013). Furthermore, it has been indicated that police are the main point of security and safety for the public; Punjab as the main province, indicates the security of the whole country. This helps explain why the ratio of stress in police constables of the provincial capital, Lahore, is high as compared with other cities.

**Conclusion:** The main findings of the study indicate that police constables are at the high risk of psychological stress, contributing both occupational and personal stressors that need to be tackled so they do not affect their level of morality and not become the cause of developing acting out tendencies towards society or family due to pressurized environment.

## 7. LIMITATIONS AND SUGGESTIONS

- The sample was restricted to five cities of only one province. The data may be collected from the entire country to enable generalization.
- Qualitative analysis should be incorporated to explore the factors associated with each variable among police constables.
- Trainings and psychological refresher courses for dealing with stressors must be introduced to maintain police constables' good mental health.

## Implications

- The research establishes that the perceived psychological stress, morality, and acting out tendencies are associated with each other according to the occupational demands in the police constables of Punjab, Pakistan.
- As seen in the research, the stress level of the Punjab police constables is addressed so that the authorities might notice and work for the betterment of the constables' psychological health.
- Through this research, stress factors were explored in detail and suggestions for working toward a better work environment for police constables at government level were noted.

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## The Syntax of Negation of Serial Verbs in Urdu

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### Abstract

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*The focus of this study is to highlight the syntax of the negation marker in Urdu serial verbs. There are two types of serial verb constructions (SVCs) in Urdu. In SVC 1, negation marker either precedes both verbs or it comes in between SVC, whereas in SVC 2 single negation marker either comes in between SVC or double negation precedes both verbs in sequence. The insertion of single negation marker in SVC does not affect the agreement phenomenon in Urdu and it merely adds supplementary negation reading in the sentence. However, the double negation affects the agreement i.e. the basic construction of SVC-1 where the first verb remains frozen and the last verb shows agreement in terms of number, person, and gender but when double negation comes in SVC-1 it converts the construction into SVC-2 where both verbs show agreement, and negation marker shows agreement in terms of aspect on first verb. Under the Minimalist Program, both negation markers originate under TP which is similar to Chomsky's representation of negation in clause. First negation marker in double negation constituent takes the frozen verb as its complement and becomes cause of its inflection, whereas the second negation marker is the specifier of the second verb which is similar to Bukhari's analysis.*

**Keywords:** Serial Verbs, Syntactic Structure, Negation Marker

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## 1. INTRODUCTION

Serial verb construction is a phenomenon where more than one verb occurs in a sequence and no conjunction or subordination intervenes between them. Bukhari (2009) has explained this phenomenon in Gojri. Following is the example of Gojri SVC:

**a.**

*kaloo-ne sa ntro chill khayo*  
*kaloo-ERG orange peel-PF eat-PST.3. S.M*  
*kaloo did not (peel and eat) an orange.*

However, there are two major types of SVC in Urdu. Firstly, the second verb V2 is responsible for tense and agreement whereas V1 remains frozen. Secondly, all verbs in SVC exhibit tense and agreement. Examples illustrating these phenomena are given below:

**b.**

*Aslam-ne khat likh bheja*  
*Aslam-ERG letter.M. 3. SG – NOM write.SV1 send-PST-SV2*  
*Aslam (wrote and sent) the letter. (SVC 1)*

**c.**

*Aslam ata jata rehta ha*  
*Aslam-NOM come-SV1 go-SV2 live-SV3 Is-T*  
*Aslam is used to coming and going. (SVC 2)*

Serial verb constructions show many features. One such feature is the negation marker, the main focus of the work. Bukhari (2009) has studied serial verb constructions (SVC) in Gojri (an Indo-Aryan language) and he explains that there are two places of negation in SVC in Gojri, it either precedes both verbs or it follows the first verb. Urdu shows two places of negation in SVC contrary to Gojri. The first place is between the two serial verbs, like Gojri, while the second place is quite different from other languages such as, Creole (Lord, 1993), Korean (Choi, 2003; Lee, 1993), Malayalam (Jayaseelan, 2004) and Gojri (Bukhari, 2009). The second place of the negation marker in the aforementioned languages is within a single SVC, and in this construction, every verb follows its own negation marker.

This may be the first attempt to study and analyze the different places of the negation in serial verb phenomenon of Urdu within the theoretical framework of the Minimalist Program (Chomsky, 2014). Consequently, the current study adds to previous studies of SVCs in world languages. Furthermore, it helps to explore the Indo-Aryan languages that have scarcity

of linguistic research. The researchers expect that the significance of the study helps the reader to understand the concept of negation in Urdu SVCs. Finally, it also assists to show the importance of negation for making SVCs.

### 1.1. Sociolinguistic Background of Urdu

Pakistan is a country where a dozen languages are spoken as first languages. Five languages (Pashto, Punjabi, Sindhi, Urdu, and Saraiki) have more than ten million speakers, all in Pakistan. Almost every language spoken in Pakistan belongs to the Indo-Iranian group of the Indo-European languages family. Urdu is the national language while English as the official one (Manan & David, 2014).

The Urdu language is a member of the Indo-Aryan languages. Initially it was known as *Rekhta*, which later became Urdu during the Mughal Empire. *Rekhta* is a borrowed term from Turkish, which means *Lashkar* and it is still used in Urdu as ‘army’. Urdu was influenced by many languages but the most influential ones at that time were Turkish and Persian; other influential languages were Arabic, Hindi, Punjabi and Sanskrit (Rahman, 2015). Rahman and Gautam (2011) referred to Urdu as a Hindi language, whereas Hindi is a regional language. According to them, Punjabi, Hindi, Gujarati and Dakhani languages are names assigned for local distinctions. Urdu was considered as the amalgamation of all these; however, it was originally developed in Delhi and its surrounding area. Up to the age of Mirza Ghalib, the term *Rekhta* remained in use and at the end of the eighteenth century it was the language of Delhi poets and writers. Later, a coined term for Urdu was used by writers as *zaban e Urdu e Mualla* in the reign of Britishers. In modern time, it is known as Urdu.

### 1.2. Aims and Objectives

The objectives of this research study are:

- to identify the different features of negation markers in Urdu SVCs-; and
- to analyze different syntactic sources and derivation of SVCs in terms of negation marker

### 1.3. Research Questions

The study bears the following research questions:

1. What are the features of negation marker in Urdu SVCs?
2. What are the syntactic sources and derivation of SVCs in terms of negation

marker?

#### **1.4. Hypothesis**

The significant features of negation marker in Urdu SVCs make this language distinct from other languages across the world but especially from other Indo-Aryan languages.

## **2. LITERATURE REVIEW**

The serial verbs phenomenon makes the structure of a language complex. In recent decades, the remarkable work of these constructions has been studied. Many researchers show different features of serial verb constructions and one of them is the negation marker which is the main focus of this study (Haspelmath, 2016; Paul, 2008; Andrason, 2018).

The question of negation has always been controversial in connection with serial verb constructions. Bisang (2009) claims that serial verb construction (SVC) does not accommodate the negation markers; however, it is not true in the case of Urdu as the study has proved that Urdu bears two negation markers in SVC. Lord (1993) considers ‘only one possible negator’ as one of the characteristics of serial verb constructions. Choi (2003) and Lee (1993) also report that the Korean serial verb constructions may have negation, as does Jayaseelan (2004) for Malayalam. According to Jayaseelan, the negation comes after first verb, and it only negates the meaning of the second verb. Bukhari (2009) has also confirmed this phenomenon for Gojri where the negation marker either precedes both verbs or it follows the first one. This proves that negation with serial verbs can occur in other languages, not only in Urdu.

García (2014) has also explained this phenomenon. According to him, negation in a serial verb construction can be marked once or more than once, but it has to apply to the whole string. The negation test indicates that the negative particle must have scope over the sequence of verb, hence confirmings the idea of a single event. However, Alamlak also exhibits only one negation marker in serial verb constructions (Aikhenvald, 2006). In this language, the negation marker has scope over the complete unit, or one of its components or any combination of adjacent components of the whole construction. Same is the case with Ewe, where the negation marker is marked once for the whole construction. The scope of the negation marker in Ewe is V, V1 or both (Ameka, 2005). Consequently, all components of serial verb constructions are marked negations with the same single negator. Bruce (1988) claimed that disambiguation of negation can be achieved with the help of context.

Occasionally, a negator may behave differently. In Barai (Papuan), the negator *ba* negates the entire SVC. The other *naebe* negates the whole SVC if it is contiguous. It can also negate components of a noncontiguous SVC separately (Foley, 2010). According to their claim, so far, no serializing language has been encountered where all the negators could have such scope effect. Only occasionally is the secondary-A concept of ‘negation’ expressed with SVCs. This appears to be exclusive to Dravidian languages (Steever, 1988; Krishnamurti, 2003). A SVC contains two finite verbs; the main verb has no restrictions on its semantic or other class, whereas for the minor verb, the expressing negation comes from a small lexically defined class (usually just ‘be’, ‘become’). Moreover, the Old Tamil (Steever, 1988) involves the negative verb ‘not become’. Similar constructions have been described for Old Kannada (Steever 1988). According to Aikhenvald (2006), asymmetrical and symmetrical SVCs can have other language-specific differences but the formal differences between various construction types in Goemai exhibit that only symmetrical coordinate SVCs allow a separate locational setting for one of the components, and negation has scope over V. In Tariana, symmetrical, asymmetrical, and event-argument SVCs differ in transitivity value and transitivity matching, in restrictions on verbs and in the scope of manner of action enclitics.

### 3. RESEARCH METHODOLOGY

The study of negation of serial verbs in Urdu was investigated in the light of the Naturalistic Research Approach, mostly used for linguistic inquiries. This approach was introduced especially for the study of language within the framework of generative grammar proposed and followed by Chomsky (1993). The primary idea of naturalistic methodology is that language should be studied as a science like other branches of science such as biology, physics, and psychology. This is also known as one of the recurring themes in most of the Chomsky’s writings. He studied language as a component of human mind; therefore, he coined the study of language and mind as ‘Methodological Naturalism’ which operates as the framework of whole Chomskyan linguistics. In the light of this research approach, language should be studied and investigated in the same way as other phenomena of the natural world are investigated. The aim of employing methodological naturalism is to provide explanatory description of the phenomenon being studied.

The major purpose of this approach is to uncover the underlying

principles on behalf of the empirical data in order to explore new issues and concepts, moving from their description towards theorizing and making generalization about the phenomenon under investigation. The operative tools and mechanisms of applying this methodology was provided by Chomsky in terms of the Minimalist Program (1995 and subsequent works). Naturalistic methodology helped the researcher in order to find certain sets of ideas which serve as the underlying principles used for the investigation of particular phenomenon of language within linguistic inquiries. Moreover, it helps the researcher in order to produce theoretical dimensions for the subject under investigation.

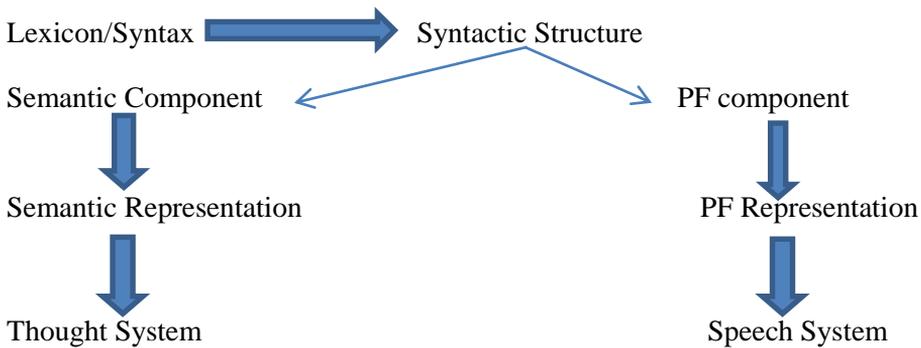
The present study uses a qualitative approach. The data is analyzed within the theoretical framework, the Minimalist Program (MP) (Chomsky, 1957, 1995, 2005). Chomsky first introduced in 1995, emphasizing that it is a program, not a theory. It is the latest version of Government Binding (GB) theory. GB has a great impact on the Minimalist Program but MP is significantly different from GB in a number of ways.

### **3.1. Minimalist Program**

Chomsky (1993) has presented a fairly flexible theoretical ground for accounting the syntactic ideas named as Minimalist Program (MP). In the past, much of Chomsky's own work was the projection of complex grammatical apparatus making the theory complex. He theorized the idea of MP that is essentially a technique for understanding the grammar. It involves an inquiry linking with cognitive science and the reflections of Chomsky's ideas of transformation and generative grammar. Generally, it belongs to the paradigm of theoretical linguistics. Grammatical studies not only deal with principles and parameters of only one language but all the languages across the globe (Chomsky, 1995). Minimalist framework is more rooted in principles and parameters theory which is also referred to as Government and Binding theory (Chomsky, 1993). The study is using MP as theoretical background as outlined in Radford (2004). It is a primary assumption that the features of human language are mutually shared by all human beings with a general capacity of acquiring language in order to motivate GG. Such mutually shared features are called 'Principles' and one of them is called 'Locality Principle'. According to Radford (2004), Locality Principle requires all the grammatical operations to be local. In other words, the grammatical operations such as A' movement, case assignment and auxiliary inversion are subject to attracting the most relevant expression (*ibid*). Nevertheless, it is claimed that all principles and parametric variations are part of genetic makeup of human beings. Such innateness is a part of Universal Grammar (UG) projected by Chomsky (1965). According to

UG, the grammar of all human languages in the brain is structured and systematized within different constituents and one of them is Lexicon (Radford, 2004). Lexicon functions as the storage facility of language faculty; furthermore, it behaves as a list of all lexical words in a language along with their linguistic features (ibid). The other components such as syntactic component also called computational constituent works with Lexicon, phonetic component and semantic component to drive only grammatically true expressions. The aforementioned relationship of components is displayed in following figure.

Figure 1 (cf. Radford, 2004:9)



Chomsky described the grammar within Generative Grammar (GG) in simplest way (Chomsky, 1993); this led him to minimize the theoretical and the descriptive apparatus used to describe language’ (Radford, 2004). Nevertheless, the minimization of theoretical and descriptive grammatical apparatus is referred as MP.

### 3.2. Representations in the Minimalist Program

#### 3.2.1. The Interface Levels

MP and GB have different levels of representation; GB consists of four levels of representation, while MP contains two levels of representation. Deep structure and Surface Structure, Logical Form (LF) and Phonological Form (PF) are associated with GB, while LF and PF are part of MP (Chomsky, 1993). They are the interface levels mainly associated with the interpretability of features.

### 3.2.2. Interpretability Features

Three features are present in lexicon such as properties of semantics, formal features and phonetic properties. Formal features always prompt the derivational operations (merge and move) (Chomsky 1995). In MP, three things are considered and discussed in details which are as follows:

- Phi-features such as number, person and gender
- Extended projection principle
- Abstract features

During the course of derivation, no semantic interpretation is achieved in terms of abstract case features whereas phi-features of nominal get valued. Therefore, unvalued abstract case features become part of derivation in the presence of phi-features present on heads of V and T. Here, the phi-features have no semantic interpretation just like abstract case features and remain unvalued while entering into derivation (Chomsky, 1995). Complementizer (C) provides these features to Tense (T) as head T does not possess these features (Chomsky, 2005). Now interpretable features finally reach at LF in the process of semantic interpretability. After reaching LF, the derivation becomes converged.

### 3.2.3. Economy

The most important feature of minimalist program is ‘economy’; MP involves economy of representation and economy of derivation. The properties of economy are mentioned below:

- i. As a principle, the economy of representation directs that there must be a reason for every grammatical structure. For example, there should not be any complexity on the part of any grammatical structure to satisfy the constraints required for grammaticality. Such constraints are similar to other checks in any optimal systems applied to the mapping in between sensorimotor and conceptual interfaces that are ultimately subject to the exploration of MP.
- ii. As a principle, the economy of derivation, it is a principle which governs the movement in order to match the interpretable and un-interpretable features. For example, the plural inflection of English regular nouns e.g. *cats* is referred as interpretable features. Here, the word ‘*cats*’ is used to refer many cats instead of one cat. It is interpretable as it adds to the meaning. Furthermore, the inflection of verbs in English is sensitive to the number of their subjects in every grammatical sentence. For instance,

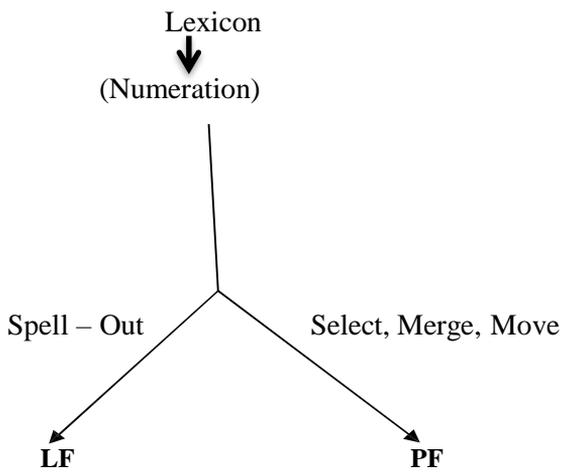
‘A cat runs’ vs ‘Cats run’; in this case, movement is necessary in order to achieve interpretability by developing a relationship between subject and verb.

### 3.3. Derivational Operations

#### 3.3.1 The Operation Select

The following figure shows the minimalist model of representation.

Figure 2: Representation of Minimalist Program



Clause derivation starts from numeration. In this process, the items are selected and then the two derivational operations e.g. Move and Merge are applied.

#### 3.3.2. The operation Merge

It is a function through which two syntactic objects (e.g.,  $\alpha$  and  $\beta$ ) merge. The merge operation is done with unordered setting of objects with a particular label (for instance, in this case, the label is  $\alpha$ ). Furthermore, it always involves a head and a non-head syntactic object. For further elaboration, consider the following examples:

- I want to eat.
- I want to eat pizza.
- Eating is fun.
- Eating pizza is fun.

This operation applies on lexical items such as ‘eat’ and ‘pizza’ to produce ‘eat pizza’. Under the minimalist program, all phrases are identified with a label. For instance in above example, the label for ‘eat pizza’ is ‘eat’ as the phrase acts as verb. In other words, the phrase is called verb phrase (VP).

Operation Merge [eat, pizza]  [eat, {eat, pizza}]

### 3.3.3. The Operation Move

The phenomenon of ‘displacement’ is well defined by the operation move. According to Chomsky (1995), the interpretation of phrases is different where they are actually heard in a sentence as compared to the original place where they are instigated. However, these phrases in analogous expressions are constructed and interpreted in terms of specific natural constraints of locality, and computational system projects the idea of displacement (Chomsky, 1993).

### 3.3.4. The Operation Agree

Between two syntactic elements, the operation ‘agree’ develops in order to match their phonological, formal, and abstract case features. The process of derivation under Agree-based theory is explained through the tree diagram given below. Figure 3 projects the derivation in terms of elaborating how the syntactic elements get merged, interpretable features get valued, and uninterpretable features remain unvalued (Chomsky, 2014).

Figure 3: Derivational Operations of MP

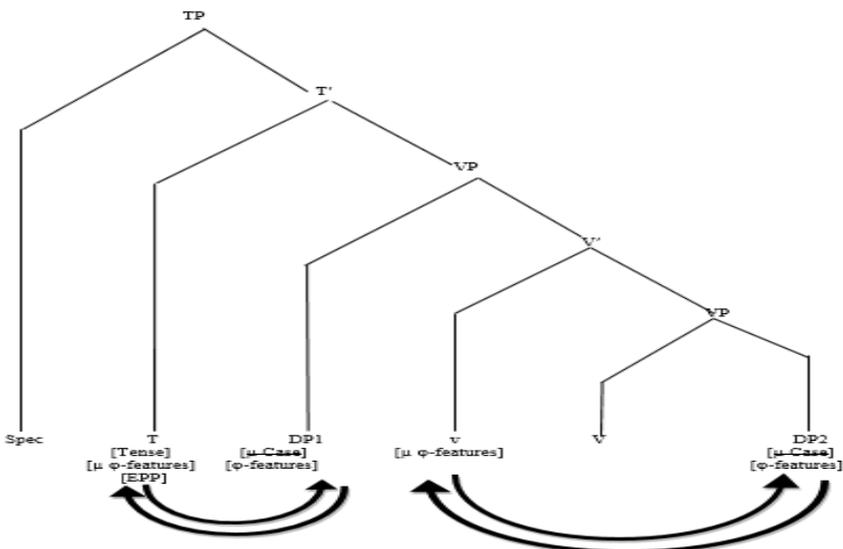


Figure 3 highlights the mechanism of getting value of uninterpretable features and their deletion process under Agree-based theory. During derivation, the syntactic elements are called probe (uninterpretable features) and goal (interpretable features). A relationship develops between probe and goal in order to get value of uninterpretable features. For example, the above figure shows little *v* as probe having uninterpretable features whereas DP2 is goal having interpretable features. Moreover, it is also important to notice that DP2 also has an uninterpretable feature such as case feature which is also in need of getting value. Probe and goal enter into derivation where case features of DP2 and uninterpretable features of little *v* get valued. The aforementioned process is a fundamental requirement of Agree-relation that is satisfied during derivation. Further, the deletion of uninterpretable case feature is done and the same relation is developed between T and DP1.

#### 4. ANALYSIS AND DISCUSSION

The phenomenon of serial verbs shows that it is a sequence of verbs and that they act together as a single predicate. The coordination and subordination markers are absent in these constructions. Like many other features, SVC also possesses negation marker. Similar to other languages of the world, Urdu also shows this phenomenon. The following features of negation marker in SVC are observed that makes the language distinct from other languages of the world. Urdu shows two places of negation marker in SVCs.

On a surface level, first place of negation in SVC in Urdu is similar to that of Gojri because in both languages, the negation marker follows the first verb whereas Bukhari (2009) explains that in Gojri, it only negates the last verb, but this is not true for Urdu because in this language, it negates both verbs. The second place of negation marker in SVC in Urdu does not exist in Gojri where every verb in SVC follows its own negation marker. In Gojri, when two negations are used in SVC then a coordination marker is used which results as a destruction of SVC. Examples are:

**d.**

*Kaloo santhro na chillyo te na khayo*

*kaloo-ERG orange-NOM NEG Peel-PF and NEG eat-PST.3.S.M*

*Kaloo did not [peel and eat] an orange.*

Bukhari explains the above cited example as non-serial verb construction on the basis of two reasons. Firstly, the presence of two negation markers is contradictory to the ‘only one negation marker’ requirement for

SVCs, and secondly, there is an overt coordinating conjunction *te* ‘and’, that rules out the possibility of the above example being a serial verb construction. But this case is different in Urdu. Although there are two negation markers present in this SVC, it does not break the rule of SVCs. Explanation of this point is given below with the help of different examples:

1(a)

*Amna-ne khat likha na bheja*

*Amna. F. SG – ERG letter.M. 3. SG – NOM write – SVI not send.M.SG-  
Amna did not write and send the letter. (SVC 2)*

1(b)

\**Amna-ne khat likha bheja*

*Amna. F. SG – ERG letter.M. 3. SG – NOM write – SVI send.M.SG-SV2  
Amna did not write and send the letter. (SVC 2)*

1(c)

*Amna-ne khat na likha na bheja*

*Amna. F. SG – ERG letter.M. 3. SG – NOM not write – SVI not send.M.SG-  
SV2*

*Amna did not write and send the letter. (SVC 2)*

1(d)

*Amna-ne khat likh bheja*

*Amna. F. SG – ERG letter.M. 3. SG – NOM write – SVI send.M.SG-SV2  
Amna did not write and send the letter. (SVC 1)*

1(e)

\**Amna-ne khat likh na bheja*

*Amna. F. SG – ERG letter.M. 3. SG – NOM write – SVI not send.M.SG-SV2  
Amna did not write and send the letter. (SVC 1)*

1(f)

\**Amna-ne khat na likh na bheja*

*Amna. F. SG – ERG letter.M. 3. SG – NOM not write – SVI not send.M.SG-  
SV2*

*Amna did not write and send the letter. (SVC 1)*

1(g)

*Amna-ne khat nahi likh bheja*

*Amna. F. SG – ERG letter.M. 3. SG – NOM not write – SVI send.M.SG-  
SV2*

*Amna did not write and send the letter. (SVC 1)*

1(h)

*Amna-ne khat likh nahi bheja*

*Amna. F. SG – ERG letter. M. 3. SG – NOM write – SVI not send.M.SG-*

SV2

*Amna did not write and send the letter.* (SVC 1)

Urdu shows two types of SVCs (see examples b and c). Examples (1a-1c) are categorized as (SVC-2) whereas examples (1d-1h) are (SVC 1) and in both types, verbs stand next to each other without any coordination and subordination except examples (1a), (1c) and (1h). First type (SVC 1) exhibits tense agreement only on the final verb and non-final verb remain as 'invariant form' (see examples 1d-1h) while in the second type all verbs in the sequence of SVC show tense agreement (see examples 1a-1c) only when negation marker *na* comes either in between the SVC or two negation markers for each verb in a sequence. Without this double negation, SVC-2 cannot be achieved in Urdu.

In 1(a), a second type of SVC is shown where both verbs in Urdu SVC never agree with any other case except the nominative. This shows that in the structure, both verbs *likha* and *bheja* only agree with the highest nominative NP *khat*, which is masculine in gender and singular in number. Both verbs do not show any agreement with the subject *Amna*, because it displays feminine gender. The above examples clearly exhibit the four patterns of negation markers in two types of SVCs. Both SVCs show the presence of two types of negation patterns; SVC 1 shows the negation marker-*nahi* that either precedes both verbs in sequence or it comes in between the SVC whereas SVC 2 exhibits the negation marker-*na* that either comes in between the SVC or double negation precedes both verbs in the sequence.

The insertion of the negation marker in 1(a) and 1(h) does not affect the agreement phenomenon in Urdu and it merely adds supplementary negation reading in the sentence but in 1(c) double negation affect the agreement i.e., 1(d) is the basic construction of SVC-1 where the first verb remains frozen and the last verb shows agreement in terms of number, person and gender but when double negation is added in SVC-1 it converts this construction into SVC-2 where both verbs show agreement. Example 1(c) shows serial verbs *likha* and *bheja* exhibiting agreement in terms of person, number and gender. Similar is the case with 1(a) where adding negation *na* in between SVC-1 turns into SVC-2. Therefore, it can be claimed that 1(a), 1(c), and 1(h) do not break the rule of SVC with negation markers in between serial verbs. Furthermore, it is obvious from above examples that Urdu shows the Consequential Serial Verb Constructions; also known as the Direct Object Sharing serial verb constructions (Chomsky, 1995). These constructions

take two transitive verbs and share the same subject and object. In consequential SVCs, the two verbs express a natural sequence of events and they are ordered in a precedence- consequence iconic relation (Gruber, 1992a). Examples 1a-h above, therefore, mean that ‘Amna wrote the letter first and then sent it.’ It is important to note that the second verb is not a result of the action of the first verb in these constructions. It is the second step of an overall plan on the part of the agent. The object of the second verb must be the same as the object of the first verb.

Moreover, the SVC in 1(a) is only true because of the presence of the negation marker. If this marker were to be removed, then the construction would be ungrammatical like 1(b). Hence, from this construction, it can also be observed that negation marker also helps to change the construction into SVC like 1(a). Moreover, if we observe 1(c) without the negation marker, it is first type of SVC in Urdu. Therefore, it is also clear from this example that often, a negation marker changes the first type of SVC into the second type of SVC in Urdu.

However, 1(e) and 1(f) both are ungrammatical, exhibiting that negation marker in both places cannot come with (SVC 1). An important point to consider is that when it tries to negate the SVC 1, then the whole construction is destroyed, and the SVC is no more. Examples are given below:

2(a)

*Amna-ne aam kaat diya*

*Amna. F. SG – ERG mango. M. 3. SG – NOM cut – SVI give. M .SG-SV2*

*Amna cut and give the mango. (SVC 1)*

2(b)

*Amna-ne aam nahi kaata*

*Amna. F. SG – ERG mango. M. 3. SG – NOM not cut – SVI*

*Amna did not cut the mango. (SVC 1)*

2(c)

*Amna-ne aam nahi diya*

*Amna. F. SG – ERG mango. M. 3. SG – NOM not give. M .SG*

*Amna did not give the mango. (SVC 1)*

2(a) shows first type of serial verb construction where tense agreement is only possible on the final verb *diya* and non-final verb *kaat* remains as ‘invariant form’ and it does not show any agreement with the highest nominative NP. The negation marker cannot be inserted between (SVC 1) as the examples 1(e) and 1(f), it can only be possible when construction bears only one verb and it follows a negation marker like above examples 2(b) and 2(c). The given examples show that Urdu is different from Gojri and other

languages across the world as it exhibits unique places of negation markers in two different types of SVCs and their effect on their meanings. Therefore, it can be concluded that negators in SVC do not influence the agreement of construction whereas they only provide additional reading except the double negation.

**4.1. Representation of Negation in Urdu Clause Structure**

Thus far in this section, the distribution of negation in Urdu sentences has been explained. The next question that arises is how negative markers are syntactically represented. In this section, firstly, the position of negation in the clause structure of Hindi as proposed by Kumar (2004), and Bukhari (2009) for Gojri is explained. Finally, we present our proposal for the location of sentential negation in Urdu clause structure.

**4.2. Representation of Negation in Kumar (2004)**

Kumar (2004) assumes that Hindi has a Neg head which takes AspP as complement. He proposes the following analysis:

Figure 3: Kumar’s Analysis of Negation Marker

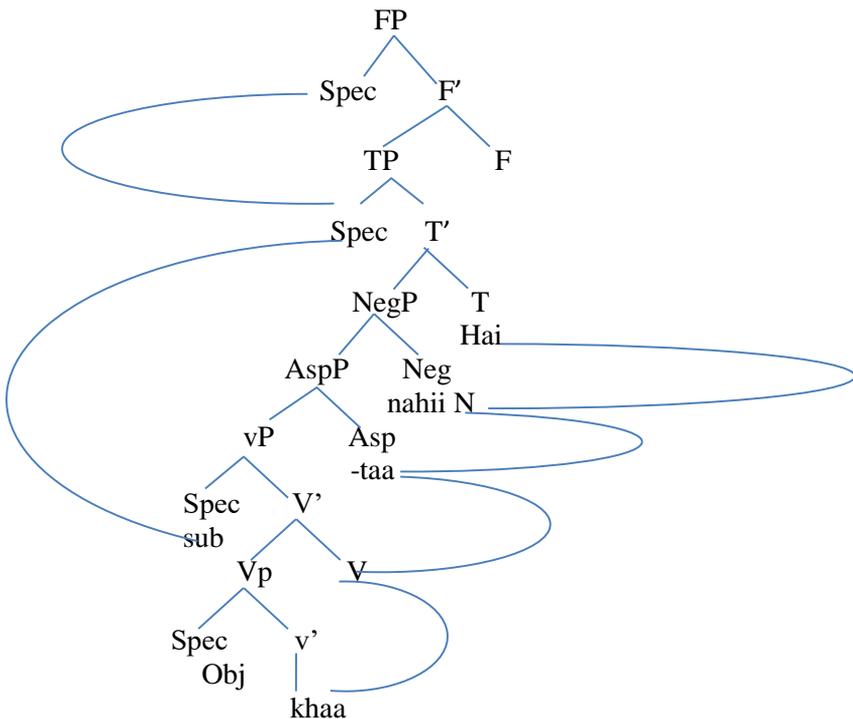
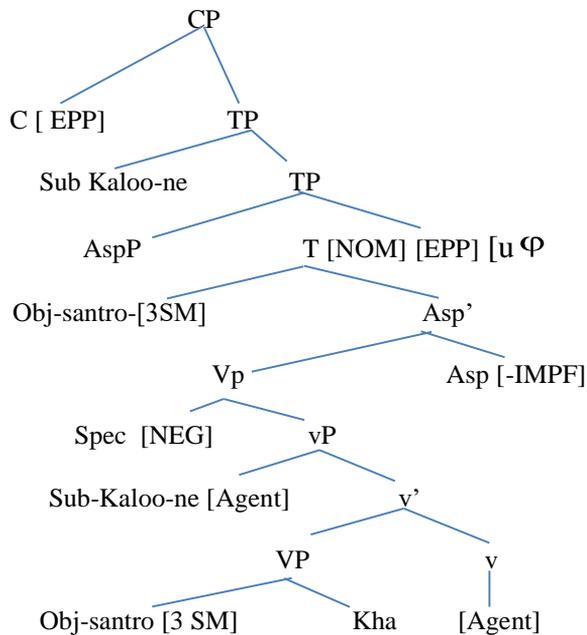


Figure 3 shows an unattractive feature of this analysis. According to Kumar (2004), the head movement that derives the inflected verb must be assumed to be switched from left-adjunction (to *v* and *Asp*) to right adjunction (to *Neg*), and back to left adjunction (to *T*) because negation would be the only prefix among a set of suffixes. Under his analysis, both complex predicates and the serial verb construction must be analyzed as derived complex heads, to which the negation is prefixed by head-movement.

#### 4.3. Representation of Negation in Bukhari (2009)

Contrary to Kumar, Bukhari claimed that the negation is a specifier of *vp* and sister to another *vp* but not a head. Following tree diagram explains the location of negation marker in Gojri.

Figure 4: Bukhari's Analysis of Negation Marker



There are three reasons for thinking that the negation in Gojri is a particle, in the sense of a non-projecting maximal category, not a head: (a) If it were a head, it would be the only head in the inflection layer which would precede its complement, while as a specifier it is expected to precede the head it is a specifier of. (b) It does not have properties typical of heads. It is not

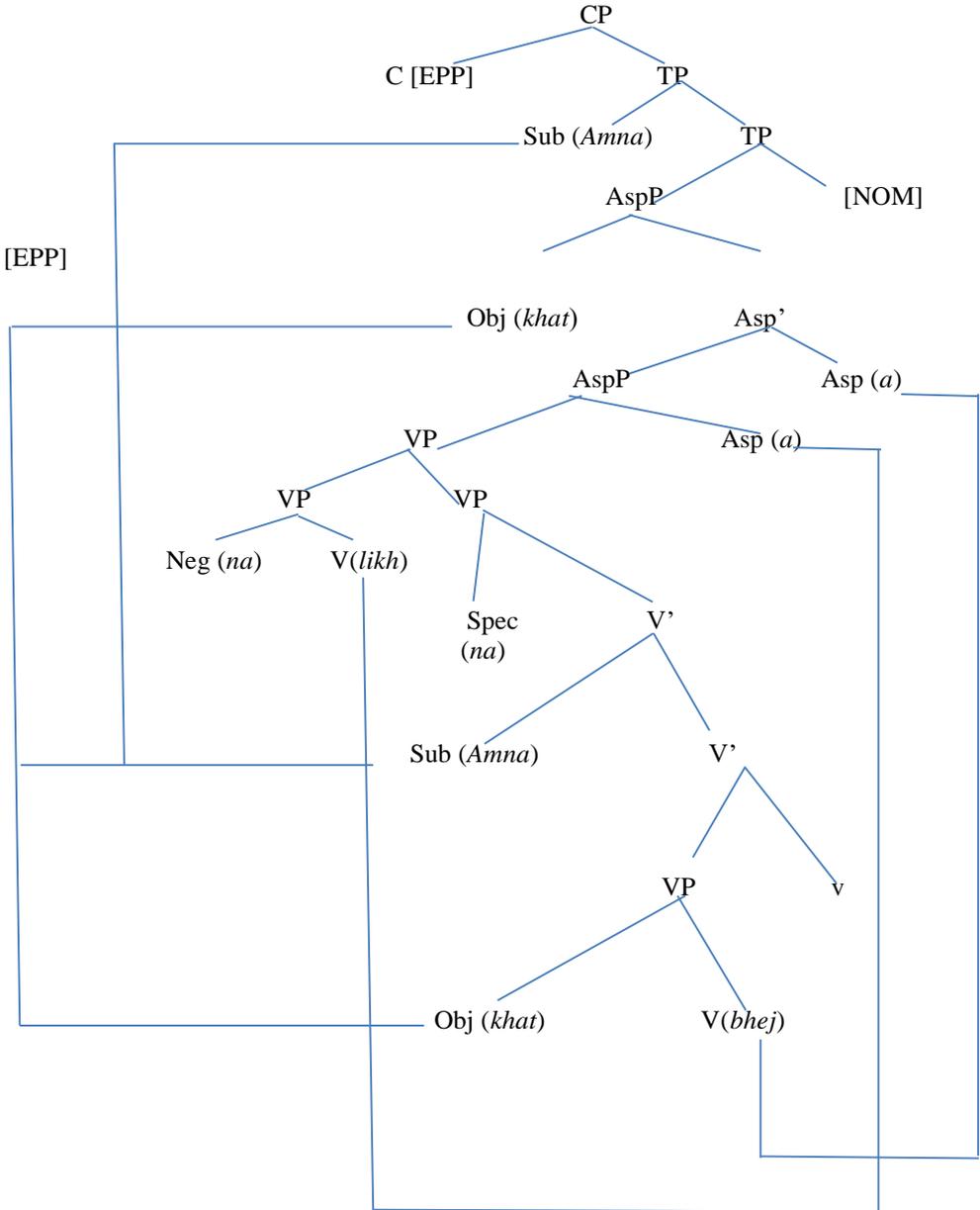
inflected, i.e., no tense feature and unvalued phi-features are present (contrary to the case of negation in Marathi which is head final language and inflected).

Moreover, it is not involved in case assignment. (c) According to Holmberg (2000) and Biberauer, Holmberg and Roberts (2008), universal word order principle- Final over Final Constraint (FOFC) (in which head final phrase cannot immediately dominate the head initial phrase) will be violated if negation is considered as head; taking vP its complement. This analysis is reasonable for preverbal negation where adjacency remains undisturbed but it lacks the explanation for double negation where the first negation marks agreement on first verb in SVC.

#### 4.4. Structural Position of Sentential Negation

So far, the researchers have discussed the proposals locating the structural position of negation in clause structure. Now, the evidence is discussed for the structural position of sentential negation in Urdu clause. On the basis of discussion section, it appears that both negation markers originate under TP which is similar to Chomsky's representation of negation in clause (see figure 5). First negation marker takes the frozen verb *likh* its complement and becomes the cause of its inflection whereas the second negation marker is the specifier of second verb *bhej*, similar to Bukhari's analysis. Two layers of *Asps* are present in this clause structure that triggers the verbs to fulfil the need of aspectual agreement. Subject of the clause moves out of VP and gets its case from TP; moreover, EPP feature also get satisfied. See the following tree structure for Urdu clause structure carrying double negation.

Figure 5. Structural Position of Sentential Negation



### 5. CONCLUSION

The focus of this research is the syntax of negation marker in Urdu serial verbs. In Urdu, serial verb constructions are of two types exhibiting the four patterns of negation markers. Both SVCs show the presence of two types

of negation patterns; SVC 1 shows the negation marker *nahi* that either precedes both verbs in sequence or it comes in between the SVC which is similar to Gojri (Bukhari, 2009) whereas SVC 2 exhibits the negation marker *na* which either comes in between the SVC or double negation precedes both verbs in the sequence.

The insertion of negation marker in SVC does not affect the agreement phenomenon in Urdu and it merely adds supplementary negation reading in the sentence but double negation affects the agreement i.e., the basic construction of SVC-1 where the first verb remains frozen and the last verb shows agreement in terms of number, person and gender but when double negation is added in SVC-1 it converts this construction into SVC-2 where both verbs show agreement, and the negation marker shows agreement in terms of aspect on first verb.

Under the Minimalist Program, both negation markers originate under TP which is similar to Chomsky's representation of negation in clause (Chomsky, 1993). First negation marker in Urdu takes the frozen verb its compliment and becomes the cause of its inflection, whereas the second negation marker in Urdu is the specifier of second verb which is similar to Bukhari's analysis.

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