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**Sustainable Development Conference (SDC) Unit**
**Sustainable Development Policy Institute**
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## Journal of Development Policy, Research & Practice

This trans-disciplinary scholarly annual journal aims to provide a diverse array of research and working papers, policy briefs, and argumentative essays on issues pertaining to sustainable development. From sustainable livelihoods to social sector development, from inclusive economic growth to institutional governance, from energy economics to climate change, from food in/security, water and human security to education, from sustainable industrial growth to resilient development, from religious tolerance to peace and gender equity, there will be something insightful for professionals, students, and readers from varied backgrounds.

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# JOURNAL OF DEVELOPMENT POLICY, RESEARCH & PRACTICE

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# Foreign Aid and Conflict in Pakistan: An Empirical Analysis

*Nadia Tahir*[*]

## ABSTRACT

*This paper examines the relationship between foreign aid and conflict in Pakistan. The country has witnessed many internal and external conflicts from 1961-2013, the period of analysis. By applying Heckman selection procedure, the study finds that aid increases conflict. Given the fungibility of aid, the results show that aid and military expenditure increase the probability of conflict and inflation, but decrease the probability of tax mobilisation. The paper concludes that strategic objectives of donors create rifts and insecurity in the recipient society which in turn increases military expenditure and arms import. It further reduces the capability to govern and reform.*

**Key words:** Conflict, aid, military expenditure, regime instability, fungibility, Pakistan.

## 1. INTRODUCTION

In the development literature, conflict has been discussed as an incompatibility of objectives between various groups. It is defined in this study in terms of incompatibility of objectives that result in violence and armed struggle in society over a long period of time. Pakistan is comprised of various ethnic and religious clusters. In such a society, a certain degree of incompatibility is not only natural, but also understandable. Scholars like Rashid (2000), Nasar (2000) and Murphy & Malik (2009) describe incompatibility of objectives as an outcome of increased religiosity or fundamentalist influence on Pakistan's society. They also highlight that emphasis on a certain explanation of *Shariah* was the root cause of this incompatibility. However, Jalal (2011) explains administrative paralysis and fractured educational system as the main reasons for the ideological remapping of liberal Pakistan as an outpost of 'original' Islamic model of Saudi Arabia. Further, Ali (2016) sees, for example, conflict in Swat as a failure of inefficient administration, along with the complex and expensive judicial system and ideological

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factors. According to these scholars, religion is used as eyewash; and in effect, following United States' (US) policies and a certain interpretation of Islam under Saudi influence, are the reasons of conflict in Pakistan. On the other hand, Tahir (2017) points out that heavy dose of economic assistance, usually given during authoritarian regimes, made it difficult to tailor indigenous policies for accommodating cultural and ethnic diversity which is essential for sustainable and inclusive development in Pakistan.

In this paper, conflict is measured in terms of casualties. This is due to the unavailability of the financial cost of armed conflicts individually. The *Pakistan Economic Survey* measures the direct and indirect cost of the War on Terror (WoT) since 2000. During the last 17 years, the cumulative cost has amounted to approximately USD 126.8 billion (GoP 2018). Pakistan has experienced conflicts of varied intensity and dimensions, but no organised armed struggle against the state. There are certain high intensity ethnic conflicts, a few inter-state wars and numerous religious conflicts, making it difficult to use annual cost of these conflicts as a focus variable. In this study, therefore, conflict is measured in terms of the fatalities. According to the Uppsala Conflict Data Program (UCDP):

> [Conflict is] a contested incompatibility that concerns government and/or territory where the use of arms between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths (UCDP/PRIO Armed Conflict Dataset 2011, p.1).

Various types of conflict were identified and discriminated as per their nature. There were certain years when there was no armed conflict, while there were years when there was an internal ethnic conflict (e.g. in Balochistan).[1] In other years, internal conflict such as MQM[2] riots and external conflict such as Kashmir occurred simultaneously. Still other years witnessed internal conflict having ethnic and religious dimensions like Tehrik-e-Taliban Pakistan (TTP) and the Baloch insurgency. According to UCDP, Pakistan is among the six countries that qualify to be in the category of 'war' because of one thousand battle-related deaths in one year.

Pakistan has a long history of conflict. The country emerged after the Partition of the subcontinent in the name of Islam, after a long series of conflicts with the British colonial power, and the majority Hindu religion (Jalal 2009). The threat perception from India took Pakistan to the US camp. India was perceived to have opted for the Soviet bloc, despite non-alignment. Pakistan became 'the most allied ally' of the US. The country

[1] From 1974-1977 and 2004 onwards, there was ethnic conflict in Balochistan.
[2] MQM is the Muhajir Qaumi Movement, a Karachi-based organisation fighting against the state in 1990, 1995 and 1996.

joined the US-sponsored security alliances of Central Treaty Organization (CENTO) and Southeast Asia Treaty Organization (SEATO) in addition to a bilateral agreement with the US. As a political and strategic partner, she received huge inflows of economic and military aid. In the 1960s, Pakistan was one of the top aid recipients. The Point Four Program, launched for Near East and South Asia, was carried out especially for Iran and Pakistan. The country adopted the path of development based on the agenda set by the Harvard Advisory Group (HAG) and the World Bank. As a result of heavy doses of aid, a Gross Domestic Product (GDP) growth rate of around 6.5% per annum was achieved. However, this aid-financed growth was lopsided, resulting in regional, social and political tensions. First, there was the war of 1965 with India. As aid inflows dried up suddenly, war followed mounting social and political tensions. Aid was distributed unequally between East and West Pakistan, which contributed to disaffection between the two sides. In West Pakistan, there was a mass revolt against the concentration of wealth and power in a few hands. By 1971, there was civil war in the country. Indian intervention led to the separation of East Pakistan in December 1971. In the early 1970s, the conflict in Balochistan also started. The Paris Club[3] was the major source of aid. Almost 77% of aid came from bilateral assistance under its aegis. A very small amount was from non-consortium and outside consortium countries.

The 1980s witnessed the fallout of the Soviet occupation of Afghanistan and the rise of the Non-State Actors (NSAs) supported by the US and Saudi Arabia, massive influx of Afghan refugees and the associated tensions. There was aid as well as growth, which collapsed as soon as the Soviet Union withdrew from Kabul. In the 1990s, Pakistan came under sanctions due to its nuclear programme. There was very little aid and very low growth. In 1999, the operation in Kargil took place. Tensions related to this conflict had not yet subsided, when India accused NSAs in Pakistan for terrorist attacks after 9/11. The WoT in the 2000s brought aid and growth back, but with the NSAs posing an existential threat to the state itself.

In this period, the composition of aid also changed from bilateral to multilateral. Initially, Pakistan received aid from the US, a bilateral source. Multilateral and non-consortium sources provided a very small amount of total foreign economic assistance. During 1999-2008, Pakistan received some aid from the US for fighting its WoT. Decline in bilateral aid means fewer grants and more loans. The US, Saudi Arabia and the United Kingdom (UK) are amongst the countries which have provided direct and indirect economic assistance to Pakistan. The influence of these countries is visible on Pakistan's society and economic thinking. The US has remained the biggest donor,

[3] The Paris Club is an informal group of world's major creditors. These countries provide assistance to debtor countries in the form of rescheduling and reduction in debt service obligations.

extending nearly USD 67 billion between 1951 and 2011 (Centre for Global Development).

It is not easy to assess the overall success of aid programmes. There are at least 71 donors, 44 sectors and 1,332,540 aid projects that were financed in developing countries during 1970-2014 (Tierney et al., 2014). Donors contend that 'recipient compliance with the agreement is subject to moral hazard and adverse selection.' This makes the aid agenda unachievable (Isopiand Mattesini 2009; and Martens et al. 2002). They put aid conditionalities like good governance, democracy and transparency, and ownership of the aid agenda for its effectiveness. On the other hand, developing countries call for more aid, specific and clear aid policy and partnership not donorship (OECD n.d.). According to Boyce and Pastor (1998), International Financial Institutions (IFIs) started using reduction in military expenditure and good governance as rhetoric for aid programmes.

Due to the controversies about whether aid promotes development or not, 2002 led to the aid effectiveness movement. Scholars applied *agency theories* to conflict-ridden societies for describing aid as an effective means to achieve policy support and reducing terrorism. Azam and Delacroix (2005), Azam and Thelen (2010), Bapat (2011), Piazza (2008), Sandler (1995 & 2006), Sandler & Enders (2004); Walsh & Piazza (2010), and Young & Findley (2011) found that aid could be used as an effective means to reduce terrorism or to win support for achieving economic, political and strategic objectives of the donor. However, Collier & Hoeffler (2004) suggest that aid works in post-conflict societies and minimises risk of future conflict. Easterly (2006 & 2008) and Pfutze (2008) suggest that donors must adopt piecemeal problem-solving techniques for making aid effective. Why countries fail to reconsider previous performance while signing new contracts is another criticism levelled against aid objectives (Isopi and Mattesini 2009). This change in aid objectives from development to compliance made it even more difficult to assess the rationale of aid in a developing society.

This paper provides empirical evidence on how aid affects a country in conflict. Conflict is the focus variable and aid appears as an independent variable with military expenditure, inflation rate and taxes. There are five sections in the paper. The second section reviews the relevant literature; the third gives a historical perspective on Pakistan. In the fourth section, the analytical framework is explained along with the data sources; and the fifth section presents the analysis, followed by the conclusion.

## 2. LITERATURE REVIEW

Research on conflict and aid relationship has mostly been done in cross-country settings. Not many country studies have been carried out on this topic. The International Terrorism: Attributes of Terrorist Events (ITERATE) dataset enabled researchers to investigate conflict in cross-country settings, with a focus on transnational terrorism. The

Global Terrorism Data (GTD) is another dataset which differentiates between domestic and transnational terrorism. Scholars have used this dataset to conduct cross-country studies. In conflict studies, geography hardly matters. Malkki (2018) reviewed articles on terrorism and political violence in Nordic countries. She found the role of these countries to be marginal. Asongu et al. (2018) estimated the relationship between terrorism and governance in Africa. They found that political and economic governance had negative effects on terrorism dynamics. Using interactive quantile regressions, Asongu et al. (2015) found that foreign aid dampens the effects of terrorism on Foreign Direct Investment (FDI). The empirical evidence was related to 78 developing countries from 1984-2008.

Tahir (2017) and Mehmood (2013) researched a single country, i.e. Pakistan. The latter analysed the impact of terrorism, estimating its cost at around 1% of real GDP per capita growth every year. However, Tahir (2017) found that conflict is strongly related to aid commitment and purpose. Country studies are of recent origin as they enable overcoming heterogeneity biases in cross-country studies. Scholars working on the aid-conflict relationship have diverse views. According to Blattman & Miguel (2010), Fearon (1995), and Fearon & Laitin (2003) inciting conflict is the rational choice of a marginalised group that wants to take over a resource. They found that some studies carried out at the global level, with a global dataset of military expenditure, yielded a positive correlation between aid levels and increased incidence of conflict (Collier & Hoeffler 2004; Balla et al. 2008). Enders & Sandler (2006), Feyzioglu et al. (1998) and Young and Findley (2011) find a substitution effect of aid: expenditure that can be made on the social sector development is made on military. This wrong policy and misallocation of resources result in unending episodes of conflict. Nunn & Qian (2014) find that conflict in developing countries more than doubled since the early 1970s. According to them, food aid has increased the incidence, onset and duration of civil conflicts in recipient countries. It is easy for armed groups to steal food aid en route. Recipients of food aid are typically weak against such groups, so rebel or militia groups 'tax' or misappropriate aid for the conflict. Stealing wheat, for instance, creates conflicts.

In her empirical research on US food aid and non-concessional food availability in PL 480 recipient countries, Stewart (1998) found that eight out of ten conflicts emerged in developing countries. Collier (2007) and Young & Findley (2011) see aid as a reward for indulging in conflict. It is an unintended consequence of aid or a consequence of aid withdrawal (Bruckner & Ciccone 2010; Nielsen et al. 2011). It leaves no power with the government to deal with rebels. Balla et al. (2008) and Besley & Persson (2008 & 2011) ask whether conflict is a consideration in giving aid. Giving aid to one group or government can create a war-like situation and shift the balance of power. Sudden change in aid allocation can inflame conflict in a society (Fearon 1995; Feyzioglu et al. 1998). Collier (2007) finds that increased military spending is a depiction of external and

internal risks. But these two risks could be completely uncorrelated because there was a low possibility of their occurrence together. According to him, if aid increases by one percentage point of GDP, military expenditure increases by 3.3%. Collier & Hoeffler (2004) show that aid works better in a post-conflict environment. Alesina and Darzen (1991) found inflation as a war of attrition between rivals. With prior knowledge of restrictive policies of the state, the elite shift the burden to the weaker sections. Persistence of inflation is the outcome of foreign aid that temporarily assuages tensions that can lead to violent outbursts (Muscat 2002). In short, a high and persistent inflation rate largely enriches the prosperous business class.

Donors impose conditionalities on aid programmes for introducing specific economic reforms. The agenda for reforms is usually annexed to the growth objective because increased purchasing power enables developing countries to import from developed countries (Webersik 2006). However, as Easterly (2008) maintains, aid may or may not produce growth, but it certainly creates and strengthens elites and predatory governments. Further, transfer of income for a specific agenda creates inequalities and distributional conflicts (Casella & Eichengreen 1996). Besley & Persson (2011) and Blattman & Miguel (2010) find that there is a positive relationship between conflict and state wealth. Conflict increases when state wealth can easily be appropriated. Increased aid inflows can cause conflict in a weak institutional framework. Developing countries have been criticised for bad economic governance and dictatorial regimes, although aid money is usually given to these very corrupt governments, unbalancing society with power politics and rent seeking. However, there is no systematic relationship between less corruption and more aid (Svensson 2000).

Another group of authors carried out cross-country studies to conclude that without aid, the situation may be worse (Hansen & Tarp 2001). Aid can be used as an effective policy tool to win support from host countries for protecting strategic and economic interests. It is effective as compared to military intervention for protecting strategic interests. Using transnational terrorism data from 1970-2000, Enders & Sandler (2002), Enders et al. (2011), and Walsh & Piazza (2010) find that respect for physical integrity is consistently associated with fewer terrorist attacks. For Young & Findley (2011), aid is effective in reducing transnational terrorism. These studies find that increased aid allocation can considerably reduce conflict. They also find that fungibility of aid and predatory states are the reason for increased conflict. Further, changing the definition of terrorism, different types of terrorism, or changing the unit of analysis affects key predictors of terror events cross-nationally. Khan (1997) finds an ambiguous impact of foreign aid on the development process: aid agencies and donor countries assume a pre-eminent position in the policy configuration; and leave the host government with little room to formulate its own policy framework.

## 3. HISTORICAL PERSPECTIVE

In Pakistan 3,848 armed conflicts against civilians were recorded, with at least three deaths in each case from 1990–2015. Around 28 incidents of attack against the government for territory by separatists, with more than 25 deaths, were reported in 1971-2015; and 23 incidents against the state with more than ten deaths occurred during 1990-2015. Pakistan has seen not only interstate violence against the government for territory, but also against the state for not implementing a specific ideology. Pakistan has fought three wars with India. There is a view that conflict at the border results in conflict in society (Themnér & Wallensteen 2013).

Table 1 shows the relationship between conflict, aid, growth, investment and military expenditure for all regimes. The first military ruler was Field Marshal Ayub Khan, whose regime in the 1960s witnessed one low intensity conflict over Kashmir in 1964; and one major conflict, the 1965 war with India. In this period, Pakistan's growth rate was the envy of the developing world. She was considered the fastest growing economy and about to take off. The war disrupted the growth momentum, recorded at an average of 6.43% annually and 4.52% in per capita terms. Aid contributed 46% of the investment. The share of economic aid in GDP was as high as 8.49%. Military expenditure was high, with its share in GDP at 3.13%, but not very high due to large inflows of military assistance.

**Table 1: Conflict, Aid, Growth, Investment and Military Expenditure (Annual Averages)**

| Regimes | Incidence of Conflict (Number) | Aid as % of GDP | GDP Growth Rate | GDP per Capita Growth | Aid as % of Total Investment | Military Expenditure as % of GDP |
|---|---|---|---|---|---|---|
| Field Marshal Ayub Khan 1961-69 | 2(L, H,T) | 8.49 (0.22) | 6.43 (0.3) | 4.52 (0.5) | 46 (0.2) | 3.13 (0.23) |
| Gen. Yahya Khan 1970-72 | 2(H,T) | 4.60 (0.33) | 4.21 (1.47) | 1.29 (4.35) | 30 (0.3) | 3.93 (0.12) |
| Zulfikar Ali Bhutto 1973-77 | 3(L, T) | 6.17 (0.30) | 4.05 (0.5) | 2.17 (0.8) | 37 (0.3) | 6.24 (0.10) |
| Gen. Zia-ul-Haq 1978-88 | 3(L,T) | 6.96 (0.15) | 5.91 (0.3) | 2.04 (0.9) | 28 (0.2) | 5.94 (0.11) |
| Benazir Bhutto & Nawaz Sharif 1989-99 | 7(L,T) | 4.25 (0.26) | 4.54 (0.5) | 1.34 (1.3) | 25 (0.2) | 5.55 (0.13) |
| Gen. Pervez Musharraf 2000-07 | 15(L, H, G) | 2.53 (0.29) | 5.35 (0.4) | 2.91 (0.8) | 14 (0.4) | 3.66 (0.07) |
| Asif Ali Zardari 2008-11 | 4(H,G) | 3 (0.45) | 2.89 (0.6) | 2.14 (0.2) | 17 (0.4) | 3.16 (0.09) |

*Source:* Author's estimation.
Key: () coefficient of variation; L= low intensity; H = high intensity; T= territory;
G= government.

In 1969, the decade long regime of Field Marshal Ayub Khan was followed by another military regime led by General Yahya Khan. In 1970-72, there were two major conflicts - East Pakistan's separation and the Kashmir war. These conflicts were of high intensity and for territory. The annual average growth rate fell 4.21% and GDP per capita increased by only 1.29%. Investment relied on aid to the extent of 30%. Expenditure on the military increased from 3.13 to 3.93% of the GDP. Resources had to be diverted to the military to save territory. Aid dependence declined, but continued to be high at 4.60% of GDP (GoP 2011 & 2016).

The democratic regime of Zulfikar Ali Bhutto (1973-77) was marked with three low intensity conflicts in Balochistan for territory, starting with the dissolution of the provincial government. Bhutto ordered a military operation. The economy grew at a moderate rate of 4.05%. There was a sharp increase in military expenditure as it grew to 6.24% of the GDP. Dependence on aid increased to 6.17% of GDP and contributed 37% of the investment. A new element was the emergence of Islamic countries as donors, contributing 1.42% of GDP. Non-consortium countries, especially China, also became significant contributors (GoP 2011 & 2016).

General Zia's regime (1978-88) was unique as it was a time when Pakistan was a country neighbouring a conflict. The Afghan war imposed a huge burden of refugees. Pakistan received aid to facilitate them and as an ally in the war. All other donors followed the US line. A sum of USD 1509 million was received during this period as relief assistance for the Afghan refugees alone. A high GDP growth rate of 5.91% was achieved. Investment depended on aid to the extent of 28%; and expenditure on military remained high at 5.94% of GDP (GoP 2011 & 2016). The US and Islamic counties were the major donors. While Pakistan was engaged with the US in the Afghan war, India established its control over the Siachen Glacier in the so-called *Operation Meghdoot*. Pakistan had to retreat. Conflict returned again in 1987 when India bypassed the resolution of the United Nations General Assembly (UNGA) and conducted 'elections' in Kashmir.

After the Zia regime, the nature, magnitude and occurrence of conflict changed in Pakistan. The consequences of Afghan war were the spread of *Kalashnikov* culture, drugs and religiosity in Pakistan. Zia's death in a plane crash in 1988 started an era of politically unstable but democratically elected governments (1989-99). Benazir Bhutto and Nawaz Sharif alternated at the realm of power in four short spells, each time dismissed on the allegations of corruption and ineptitude. During this time, Kashmir was the main flashpoint of conflict. The battle-hardened Afghan *mujahedeen* were blamed by India for involvement in Kashmir after the end of the Soviet Afghan war. When India carried out its nuclear tests in 1998 and Pakistan followed suit, nuclear competition added to the conventional arms race between the two countries. The occupation of a vacant peak in Kargil range blocked the Indian highway between Kashmir and Laddakh. It was feared

that this conflict might develop into a nuclear conflict in the region. The US intervened for a ceasefire. Kargil, however, proved to be the culminating point of democratically elected political governments. Changing governments, low intensity conflicts with India and ethnic conflict in Karachi resulted in a lower GDP growth of 4.54%. Investment depended on aid at 25% and military expenditure was, for the first the time, higher than the aid received i.e., 5.55 and 4.25% of GDP, respectively (GoP 2011 & 2016).

General Pervez Musharraf's regime (2000-07) witnessed a multiplicity of conflicts. The conflict in Kashmir took a new dimension with the attack on Indian-held Kashmir assembly in Srinagar in 2001. An attack on the Indian Parliament in New Delhi in the same year resulted in diplomatic break-up and closure of transport links. India threatened to retaliate. There was a threat of nuclear war in 2003. This was the time when Baloch insurgents gathered strength again to demand more control of the province's resources. The conflict became severe after the killing of tribal chief Nawab Akbar Khan Bugti. Balochistan is ethnically complex because it has not only Baloch inhabiting it, but also Pakhtuns and various other groups.

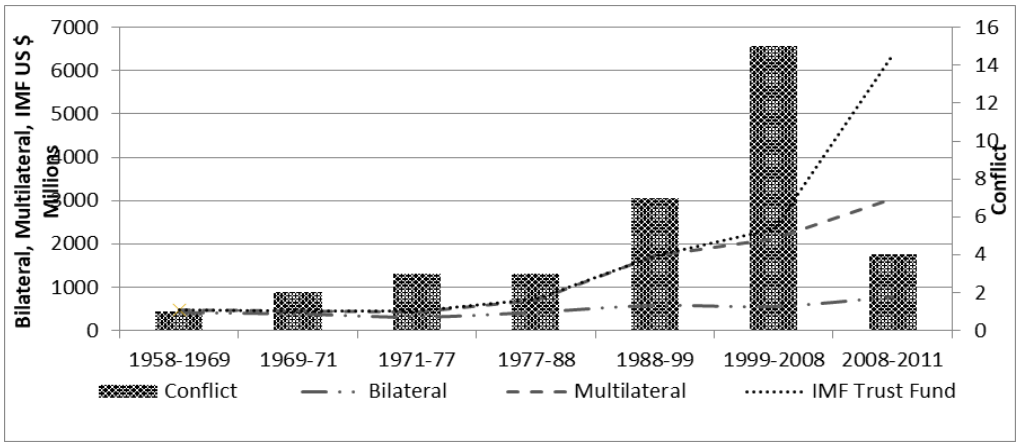
The TTP and other militant groups pose another type of threat to the state.[4] These groups do not necessarily want territory, but they do want control of the government to impose their version of Islam. They operate in rural as well as urban areas. General Musharraf supported the US-led WoT in return for aid and arms. Ordinary people were confused when the *mujahedeen* reared by the US as allies were suddenly declared terrorists after 11 September 2001; and subjected to drone attacks in Pakistan's tribal areas. During this period, GDP grew at 5.35% and the dependence of investment on aid was 14%. There was relatively less foreign aid, less expenditure on the military, but more (15) incidents of conflict (GoP 2011 & 2016; UCDP/PRIO 2015).

In terms of strategic policy and incidence of conflict, Zardari's democratic regime was a continuation of the Musharraf era. It witnessed four incidents of conflict in which TTP was involved as a reaction against US policy in Afghanistan; and drone attacks during the period studied here (2008-11). However, GDP growth was the lowest ever, with higher dependence of investment and the economy on aid. Military expenditure was lower at 3.66% of the GDP which was 5.5% of the GDP during the decades of democracy (Ibid.). Despite higher inflows of aid, lower defence expenditure and lower incidence of conflict, growth slowed down.

[4] In 2014, Pakistan Army started *Operation Zarb-e-Azb* in North Waziristan against al-Qaeda, the Islamic Movement of Uzbekistan (IMU), the Chechen Islamic Jihad Union (IJU) and Emirate-e-Kaukav, as well as the East Turkestan Islamic Movement (ETIM) and other various factions of the TTP like Jamaat ul-Ahrar. Harkat ul-Jihad-e-Islami (HuJI), Harkat ul-Mujahideen (HuM), Lashkar-e-Jhangvi (LeJ), Jaysh-e-Muhammad (JeM) and Lashkar-e-Taiba (LeT). This operation was successful in restoring peace to Pakistani cities (Zahid 2015).

In sum, conflict and aid have had a negative impact on the process of reforms. Aid led to growth but with high volatility. Values of the coefficient of variation in all democratic regimes were higher than their predecessor military regimes, suggesting inconsistency in allocation of aid. The country secured highest aid inflows during the regime of Field Marshal Ayub Khan. There was high growth, but not without creating a divide between the rich and poor. A clear objective and an approach to long-term development on a sustained basis were missing. It resulted in inequalities and an elite class. This laid the foundations of reliance and dependence of policymakers on a foreign-guided agenda; and elite capture of the state which was never popular with the poor masses.

**Figure 1: Relationship between Foreign Economic Assistance and Conflict**




*Source:* Economic Survey of Pakistan, various issues

Figure 1 shows the relationship between conflict and aid in Pakistan. With every episode of conflict, the country received more aid, either as a reward for being in conflict or for the delegated task of protecting donors' strategic interests.

## 3.1. Macroeconomic Indicators

Pakistan is a clear case of a society where the state finances its fiscal deficit by inflation. When there is greater availability of foreign aid, there is low inflation. The state implicitly taxes its people and encourages rent seeking. Table 2 shows various indicators of macro economy in Pakistan. There is a continuous increase in inflation rate, decrease in tax-to-GDP ratio and depreciation of currency. Conflict and aid have had a negative impact on reforms. Pakistan has one of the lowest taxes to GDP ratio in the world which shows that the state prefers to tax its people implicitly, and values today's consumption more than future consumption. During 1989-2000, tax-to-GDP ratio was 13%, but it has since declined to 9% during 2008-11 (GoP 2011 & 2016; UCDP/PRIO 2015). The government prefers to increase prices which are an implicit tax rather than increase the tax ratio. Since they control the state, the elite easily shift the burden to the poor and vulnerable in the form of indirect taxes and inflation.

**Table 2: Impact of Aid on Macroeconomy (Annual Averages)**

| Regimes | Taxes (% of GDP) | Inflation (% increase in CPI) | Exchange Rate (Rs/USD) | Aid (% of GDP) |
|---|---|---|---|---|
| Field Marshal Ayub<br>1961-69 | 8.900<br>(0.154) | 3.508<br>(0.784) | 4.760<br>(0.000) | 8.49<br>(0.22) |
| Gen. Yahya Khan<br>1970-72 | 11.000<br>(0.000) | 4.957<br>(0.065) | 4.760<br>(0.000) | 4.60<br>(0.33) |
| Zulfikar Ali Bhutto<br>1973-77 | 12.000<br>(0.053) | 15.678<br>(0.568) | 9.480<br>(0.111) | 6.17<br>(0.30) |
| Gen. Zia-ul-Haq<br>1978-88 | 10.707<br>(0.047) | 8.616<br>(0.317) | 9.317<br>(0.378) | 6.96<br>(0.15) |
| Benazir Bhutto & Nawaz Sharif<br>1989-99 | 13.182<br>(0.066) | 9.230<br>(0.327) | 33.635<br>(0.305) | 4.25<br>(0.26) |
| Gen. Pervez Musharraf<br>2000-07 | 10.500<br>(0.051) | 7.708<br>(0.733) | 59.790<br>(0.028) | 2.53<br>(0.29) |
| Asif Ali Zardari<br>2008-11 | 9.140<br>(0.056) | 13.764<br>(0.078) | 81.150<br>(0.046) | 3<br>(0.45) |

*Source:* Author's estimation.
Key: () coefficient of variation.

## 4. ANALYTICAL FRAMEWORK

This study explains how aid affects conflict in Pakistan. It attempts to model the relationship between conflict and aid, by using military spending, taxes and inflation rate as control variables. The hypothesis is that conflict in Pakistan is a function of aid, military expenditure and weak government capacity. Tax-to-GDP ratio and inflation rate were used to serve as proxy for government capacity.

The cost of conflict is weak economic development; and reliance on aid creates inefficient governments that delay reforms in the hope of getting more aid. Fungibility allows government to divert aid to purposes other than development or priorities different from the donors. Donor objectives and fungibility in aid allocation harbour negative externalities in a developing society like Pakistan, which is lacking in capacity to internalise these negative effects. Conflict results in regime instability and lower economic growth. To determine the direction of relationship between aid and conflict, the Granger Causality Test (GCT) was carried out. For establishing the relationship between conflict, aid, military expenditure, taxes, and inflation rate, the study applied the Ordered Probit Model (OPM) and Heckman selection procedure (McKelvey and Zavoina 1975).

### 4.1. Methodology

Conflict ($y_i$) is the dependent variable measured in terms of fatalities. To discriminate between various type of conflict in any given time multinomial scale in discrete intervals was used (0-4), where zero means no conflict, 1 means external conflict, 2 means internal

ethnic conflict (Balochistan), 3 means internal and external conflict (war with India and MQM riots, and 4 means internal conflict (ethnic and religious). GCT (1969) was used to determine the causation between 'conflict' and 'aid' or vice versa, 'conflict' is said to be Granger caused by 'aid' if it helps in the prediction of 'conflict'. Conflict and aid is denoted by *y* and *x*, respectively. The author applied GCT on aid, conflict, GDP growth rate, regime instability and taxes in Pakistan. After establishing the causation OPM was used to capture differences between various conflict severities:

$$y_i = x_i \hat{a} + \varepsilon_i \,, \quad \varepsilon_{i \sim N(0,1), \forall\, i=0 \ldots m}$$

where $y_i$ is the conflict coded from 0-4, â's are the probabilities associated with the observed outcomes, $x_i$ is the vector of aid, military expenditure, taxes and inflation rate, and $\varepsilon_i$ is the normally distributed error term with zero mean and constant variance (McKelvey and Zavoina 1975). First with the canonical formulation, based on the GCT, an OPM was estimated for finding the relationship between conflict and aid. To correct the bias at the second stage, a transformation of these predicted individual probabilities was incorporated as an additional explanatory variable. In this model, first the equation predicting conflict and selection equation predicting aid were set as the reason of conflict.

The generalisation that aid causes conflict can give biased results because there are years when there is aid, but no violent conflict. There is a selection problem that inference cannot be extended to the unobserved group, which in this case is the impact of aid when there is no conflict. What would be the amount of aid given to Pakistan when there is no violent conflict or what is the amount of aid given to Pakistan when there is a conflict? The solution of this problem was to use the Heckman selection model (Heckman 1979). The study aimed to estimate the consequences of aid, but had access only to data on GDP growth, policy reforms, poverty and military expenditure. This data ignores conflict. Once the conflict data was acquired, it was seen that there are certain years without any conflict. The selection equation measures the impact of those years when there was conflict as compared to the years when there was no conflict.

## 4.2. Data Sources

The focus variable of this study is conflict in Pakistan, as coded in the UCDP Armed Conflict dataset, version 4- 2011 (Themnér and Wallensteen 2011). Data on aid includes all grants and loans given to Pakistan during 1961-2011. It was taken from the *Statistical Appendix to Pakistan Economic Survey 2010-11* and relevant previous issues. Military expenditure series is from various Stockholm International Peace Research Institute (SIPRI) yearbooks, while arms imports data was taken from the *World Development Indicators*, September 2011.The source of data on GDP growth rate, GDP at market prices and exchange rate was the Pakistan Bureau of Statistics (PBS). Information about

the Consumer Price Index (CPI) was taken from *International Financial Statistics*, September 2011.

## 5. EMPIRICAL RESULTS

The GCT suggests that conflict causes foreign economic assistance without feedback. Also, GDP growth rate has a unidirectional causality with conflict. These two outcomes suggest that foreign aid and GDP growth cause conflict. But the causality test of aid and GDP growth rate indicates that aid causes GDP growth without feedback. When combined, it can be concluded that aid is a cause of growth and conflict in Pakistan. There was no feedback found between regime instability and aid. Table 3 shows the results.

**Table 3: GCT Results**

| Cause and Effect | F-Statistic | Probability | Decision |
|---|---|---|---|
| **Aid does not Granger Cause Conflict** | **6.72491** | **0.0027** | **Reject** |
| Conflict does not Granger Cause Aid | 1.42690 | 0.2505 | Accept |
| **GDP does not Granger Cause Conflict** | **4.15999** | **0.0218** | **Reject** |
| Conflict does not Granger Cause GDP | 2.34931 | 0.1068 | Accept |
| Regime does not Granger Cause Conflict | 0.98007 | 0.3830 | Accept |
| Conflict does not Granger Cause Regime | 0.17220 | 0.8424 | Accept |
| **Aid does not Granger Cause GDPR** | **3.11641** | **0.0538** | **Reject** |
| GDP does not Granger Cause Aid | 1.44696 | 0.2458 | Accept |
| Regime does not Granger Cause Aid | 0.32717 | 0.7226 | Reject |
| Aid does not Granger Cause Regime | 1.68524 | 0.1966 | Reject |

*Source:* Author's estimate.

There are certain years when there was no violent conflict, but there was aid which affects the whole economy. Those observations were censored, when there was aid but no violent conflict. The Heckman probit model was used to estimate the real effect of aid on conflict. This methodology allowed estimating a selection equation and an outcome equation:

Outcome Equation: Conflict = f (aid, military expenditure)

Selection Equation: War = f (aid, military expenditure, inflation, taxes)

The first equation (outcome equation) estimated the effect of aid and military expenditure on conflict (Table 4). At the $4^{th}$ iteration, the model converged on the log likelihood ratio of –58.512442. The likelihood ratio chi-square of 26.30 with a probability value of 0.0000 suggests that the model is statistically significant:

**Table 4: Ordered Probit Regression**

Number of obs = 51 LR chi2 (2) = 26.30
Log likelihood = -58.512442 Prob> chi2 = 0.0000
Pseudo R2 = 0.1835

| Conflict | Coefficient | Standard Error | Z | P>\|z\| |
|---|---|---|---|---|
| Oda | 0.2958959 | 0.1201611 | 2.46 | 0.014*** |
| Mexp | 0.001158 | 0.0002605 | 4.45 | 0.000*** |
| /cut1 | 3.120312 | 0.9331128 | | |
| /cut2 | 4.05566 | 0.9713684 | | |
| /cut3 | 4.700242 | 0.9942034 | | |
| /cut4 | 5.115743 | 1.027254 | | |

*Source:* Author's estimate.
Note: *** p<0.01, ** p<0.05, * p<0.1

Aid and military expenditure have a positive and significant effect on conflict. The value of aid coefficient is 0.29 which was the same as in the OPM and at the first stage of the Heckman equation. One unit of increase in aid and military expenditure increases the probability of conflict in Pakistan, and both variables are significant as well. A positive sign of variables shows increased probability of aid, and military expenditure increases the probability of conflict. However, aid has stronger effect than military expenditure in Pakistan.

**Table 5: Overall Heckman Selection Model**

| Conflict | Coefficient | Standard Error | z | P>\|z\| |
|---|---|---|---|---|
| Oda | 0.266567 | 0.13568** | 1.96 | 0.049 |
| Mexp | 0.001107 | 0.000288*** | 3.84 | 0.000 |
| Cons | -2.07561 | 1.085052 | -1.91 | 0.056 |
| War | | | | |
| Cpi | -0.03561 | 0.004461*** | -7.98 | 0.000 |
| Taxes | 0.07081 | 0.00887*** | 7.98 | 0.000 |
| Oda | 0.342729 | 0.122779*** | 2.79 | 0.005 |
| Mexp | 0.001299 | 0.000276*** | 4.7 | 0.000 |
| Cons | -4.33876 | 1.01605 | -4.27 | 0.000 |
| /athrho | 16.35542 | 262.0043 | 0.06 | 0.950 |
| /lnsigma | 0.128338 | 0.125269 | 1.02 | 0.306 |
| Rho | 1 | 6.46E-12 | | |
| Sigma | 1.136937 | 0.142422 | | |
| Lambda | 1.136937 | 0.142422 | | |

*Source:* Author's estimates.
Note: *** p<0.01, ** p<0.05, * p<0.1
Wald chi2 (2) = 19.52
Log likelihood = -55.98282
Prob> chi2 = 0.0001

At the selection stage, all observations without violent conflict were censored in order to find the effect of aid on conflict. It was hypothesised that violent conflict in society is a reflection of weak government that fails to collect taxes, relies on aid and imposes indirect taxes in the form of inflation. At the second stage the effects of independent variables on the outcome were examined. As the value of ρ (rho) is significantly different from zero, we reject the null hypothesis of correlation between the two error terms of two equations, i.e., choice and select equation. This shows that the chosen procedure is valid and relevant. Lambda (λ) provides the insight about the coefficient of inverse mill ratio. Inverse mill ratio is the ratio of the probability density function over the cumulative distribution function of a distribution. Both ρ and λ are significantly different from zero, indicating that the two equations are related and sample selection is present.

The adjusted standard error for the war equation regression is given by sigma (σ) =1.13, and the correlation coefficient between the unobservable that determines selection into war equation is given by rho (ρ) =1. The estimated selection coefficient lambda = sigma×rho = 1.13. It is significantly different from zero. The average truncation effect is computed as lambda× [average mills value] = 1.13×0 .879 = 0.993. This shows by how much the selection equation of wars, are shifted up or down due to the truncation effect.

**Table 6: Final Stage of Heckman Procedure**

| Conflict | Coefficient | Standard Error | z | P>\|z\| |
|---|---|---|---|---|
| Oda | 0.342932 | 0.17928 | 1.91 | 0.056* |
| Mexp | 0.000889 | 0.000486 | 1.83 | 0.067* |
| CPI | 0.026745 | 0.044372 | 0.6 | 0.547 |
| Taxes | 0.058914 | 0.162933 | 0.36 | 0.718 |
| Invmills | 0.878677 | 0.640023 | 1.37 | 0.170 |
| _cons | -6.5148 | 2.837588 | -2.3 | 0.022 |

*Source:* Author's estimates.
Note: *** p<0.01, ** p<0.05, * p<0.1
Truncation effect = [exp (0.99327)-1]*100= 169 %

There is a positive truncation effect of aid on war years. This means that when only war years were, the effect of aid on conflict increased by 169%. It is significant because chi square value is also significant. The final stage of Heckman procedure by including inverse mill ratios is given in Table 6. It can be seen that probability of conflict increased from 0.29 to 0.34 and it is significant as well.

## 5.1. Marginal Effects of Probit Model

**Table 7: Probit Regression Reporting Marginal Effects**

Number of obs = 51 Wald chi2 (4) = 15.94 Prob> chi2 = 0.0031
Log pseudo likelihood = -21.953899 Pseudo R2 = 0.3646

| Conflict | dB/dx | Standard Error | Z | P>\|z\| | x-bar |
|---|---|---|---|---|---|
| Oda | 0.156682 | 0.05655 | 2.79** | 0.005 | 3.53772 |
| Mexp | 0.000545 | 0.000135 | 3.93*** | 0 | 2035.88 |
| CPI | 0.019161 | 0.013958 | 1.35 | 0.176 | 8.28659 |
| Taxes | 0.00222 | 0.039066 | 0.06 | 0.955 | 11.549 |
| obs. | P | 0.588235 | | | |
| pred. | P | 0.642814 | (at | x-bar) | |

*Source:* Author's estimates.
Note: *** p<0.01, ** p<0.05, * p<0.1

Partial effects of response probabilities on conflict were estimated. These marginal effects measure the change in the probability of conflict for an infinitesimal change in each independent variable. Table 7 explains that at mean value of conflict, aid increases probability of conflict by 16%, military expenditure by 0.05%, CPI by 1.9% and taxes by 0.2% in Pakistan. These results are computed on robust standard errors.

## 6. CONCLUSION

The aim of this paper was to explain how aid causes conflict in Pakistan. The main finding that aid is the cause of conflict in Pakistan is similar to Collier (2007), Balla et al. (2008), and Nielsen et al. (2011). Collier concluded that conflict is an unintended consequence of aid that leads to increased military expenditure. He and his colleagues found the sudden withdrawal of aid to be a causative factor of conflict in developing countries. According to them, declining aid creates a gap in military expenditure which developing country governments are unable to bridge. The study identifies aid inflows within the framework of strategic alliances as a reason for aggravated external conflict that divides society by changing expectations of individuals. It increases the intensity and probability of the occurrence of conflict. There is a causal link between internal and external conflict, which is aggravated by aid to predatory governments. The policy of strategic partnership with the US during the Cold War resulted in a divided society and affected shared norms and institutions. The policy isolated Pakistan in the region and also created internal conflict. The Afghan conflict in the 1980s and the ongoing WoT have had similar effects. All types of aid inflows to Pakistan are conditioned on conflict because of unclear agendas, and rather general objectives of the donors. Beginning as technical assistance, aid now aims to reform institutions and ensure good governance, objectives whose success obviously cannot happen during the terms of aid agreements.

Pakistan's defence spending has been declining as a percentage of GDP and government expenditure since 1990, but internal conflict has increased expenditure on internal security and justice system. Internal armed conflicts have badly affected economic conditions, resulting in lost growth and unsustainable budget deficits. In pursuit of austerity, neglect of the social sector has continued. The result that declining military expenditure has not led to a compensating increase in social sector spending due to deteriorating economic conditions, concurs with the conclusion of Deger & Somnath (1991) and Murshed & Sen (1995). Furthermore, this study does not find any evidence that donors have imposed conditionality on Pakistan to reduce its military expenditure. The strategic policy of external conflict is the source of increased military expenditure, and is responsible for social sector neglect that appears as intense internal conflict. Aid is highly collinear with military expenditure that results in increased arms imports, and is a cause of conflict in society because far less is spent on the social sector. In the beginning, Pakistan had greater reliance on bilateral aid, but now multilateral donors dominate the scene. Falling grants and greater reliance on loans has imposed a heavy debt burden.

Aid increased the occurrence, nature and dimensions of conflict in Pakistan, and led to irresponsible and unstable political governments who wait for donors to prescribe policies rather than take the initiative to reform. They prefer today's consumption to future consumption by shying away from explicitly taxing the elite. The governments prefer to

tax people implicitly in the form of inflation and indirect taxes that create distortions and shift the burden to the poor and the vulnerable. The decline in social sector spending and taxes reflects the eroded power of the state to govern. Aid is a source of growth that cannot be sustained because of the increased scale of conflict. Conflicts eroded the state's ability to ensure public welfare and establish peace, rule of law and protect life and property. Conflict-driven aid received to protect territory and writ of the state became a threat to the state itself.

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# *Kamlahari* Movement in Nepal: Expanding Opportunities, Uncertain Achievements

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## ABSTRACT

*This paper maps out a movement of Kamlahari girls in Nepal which is popularly known as 'Kamlahari' both in lingual and literal terms. This study analyses a semi-bonded child labour system among the girls of the Tharu ethnic community. Despite the long historical background of the Tharu movement, critics suggest that the freedom of Kamlahari in 2013 is largely neglected and has become a less prioritised agenda. Building on this critique, the paper aims to analyse different issues, challenges and opportunities of and from the Kamlahari movement, particularly in context of the western Tarai region of Nepal. Methodologically, the paper follows a set of qualitative methods, including narrative analysis of both primary and secondary sources. The central proposition of the paper is that there are some critical issues and contestations in the movement of Kamlahari girls, ranging from rescue and rehabilitation to educational support and livelihood sustenance. With the changing socioeconomic and constitutional provisions, Kamlaharies have had a number of opportunities for their mainstreaming, but there have been some uncertainties to benefit from them both at the level of policies and programmes. To emphasise this dilemma, the paper argues that 'freedom of the Kamlahari girls' is yet to be institutionalised at the grassroots level through a set of policy inputs and livelihood outcomes.*

**Key words:** Tharu, *Kamlahari* movement, actors, gender, social movement, Nepal.

## 1. SETTING THE CONTEXT

While Nepal's society has not faced any kind of slavery or a specific era of 'slaves', nevertheless, a slavery system was adopted to institutionalise feudalism (Regmi 2002). However, this somehow exists differently in the South Asian context (Upadhyaya 2004). Many of the slavery systems existed in Nepal along with the bonded labour system,

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which became persistent under the nexus of class, caste / ethnicity and gender. Following this, *Kamlahari* was a domestic slavery system which was developed as the worst kind of bonded girl child labour practice embedded within an unequal social structure. Historically, this was common practice among the poor Tharu community in the Tarai belt of mid- and far-west region in Nepal (Fujikura 2013; Maycock 2015). Poor Tharu parents send their daughters below the age of 18 years to work with landlords and other rich families of their own community or beyond for assisting in household and field work at a minimum wage or in kind. This practice was rooted structurally under the patron-client relationship; and thus, the *Kamlahari* system became institutionalised both in the Tharu and non-Tharu communities in the western Tarai region of Nepal.

However, the *Kamlahari* practice system had multiple facets, not restricted to the communal and regional domain of the Tharus. While politically, it is a feudal practice, it has remained as a socio-cultural aspect of the poor Tharus and the rest of society. As most *Kamlahari* girls were or are below 18 years of age, this practice deprived them from having child rights. Thus, the *Kamlahari* movement can also be labelled as an 'anti-child labour movement' in Nepal. Economically, it was a system that emanated from poverty, inequality, dependency and livelihood insecurity of the people. As a political discourse, the *Kamlahari* practice could not become a prime agenda of government policies, despite the fact that the Government of Nepal (GoN) has enacted a number of child rights endorsements and is a signatory of international commitments. Some scholars (e.g., Chaudhary 2013; Dahit 2008; Rankin 1999) also argue that it is a socio-cultural problem imposed by non-Tharus upon the Tharus with a political and economic stratification. These arguments are primarily based on the primordial basis of Tharu ethnicity. Critical Marxists (e.g. Mishra 2011; Sapkota 2014a), however, maintain that *Kamlahari* is a class-based issue perpetuated by the elite given societal power structures. These scholars further argue that the bonded systems in Nepali society, including the *Kamlahari* system, severely affected the poor households in comparison to the rich people and communities. Thereafter, slavery moved downward to the marginalised groups in terms of caste / ethnicity. The Marxist scholars, thus, observe the issue of *Kamlahari* from the 'political economic' perspective.

Despite these contradictory views, the *Kamlahari* practice has been widely perceived as bonded labour system and violation of child rights. It can be categorised as a 'movement approach'. Following this, non-state actors (NSAs) and social movement groups started to raise the issue from 1990 onwards, which further catalysed as a political agenda during the era of the Maoists rebellion (1996-2006) and became intensified in the People's Movement (2006). Moreover, it became a common right-based issue for many development agencies. After a series of agitations and demonstrations, the system was formally outlawed by the Government of Nepal with the 10-Points Agreement on 10 June

2013; and the subsequent declaration of freedom in 18 July 2013.[1] Despite the declaration, neither all the girls were rescued, nor could a proper package of rehabilitation be instituted for the rescued ones. Moreover, it was eventually reported that some of the girls disappeared and their status could not be identified, while a few of them have been kept bonded in the towns of Nepal as well as in the Indian markets and households (Freed *Kamlahari* Development Forum-FKDF 2018).

In this context, this paper analyses the causes and strategies of the Kamlahari movement; and then moves towards the analysis of achievements and future challenges. The research questions have been set as:

1. How did the movement of the *Kamlahari* girls emerge in Nepal, and what kind of issues, actors and agendas did it manifest?
2. How did the movement achieve the most results for the freedom of the *Kamlaharies*, both from the governmental as well as non-governmental sectors?

## 2. THARUS OF NEPAL AND THE *KAMLAHARIES*: A NARRATIVE

Tharu is the second largest ethnic group of Nepal who make up 6.6% (i.e., 737,470 from the total population of 26,494,5041) in the country (CBS 2012). They are found abundantly in all the districts of the Tarai region with a heterogeneous culture, language and livelihood practices. Available literature (Krauskopff 1998; Panjiyar 2000) reveals that Tharus are an ancient ethnic group who first cleared the dense forest in the Tarai region, settled down and started cultivation. Despite this historicity, contemporary social life of the Tharus has been entrapped within rampant poverty and inequality as compared to other caste/ethnic groups which exceeds the national average of the country as well (Bennett & Parajuli 2013; CBS 2011; UNDP 2015). The issues and voices of the Tharu community remained out of mainstream politics for many decades, even though the Tharu movement started in the early 1950s in the name of cultural reform and community welfare. With the decade-long Maoist armed struggle (1996-2006), and subsequent joint movement of political parties held in 2006, identity-based ethnic movements rose, and the Tharuhat Movement became an unavoidable social movement in Nepal. Eventually, identity politics and right-based movement surfaced in Tharu activism in the national as well as regional context of Nepal, and it has also become one of the critical issues in constitution-making and the federal delineation process (Panday 2017; UN RCHCO 2013).

[1]Among the agreed points between the Government of Nepal and joint struggle committee working against the *Kamlahari* system, the 6th, 7th and 8th statements are historically important since the others are specifically related to local issues of the system. The agreement is focused mostly on the issue of education which further lacks specific plans of implementation. The GoN does not have specific economic enhancement interventions, such as provision of land, skills development or market linkages, for the Tharu community in general or free *Kamlahari* families, in particular.

In the particular case of Tharus, identity politics emerged through the Tharuhat movement, which consistently demanded a Tharuhat autonomous territory based on the Tharu population and ethnic identity in the Tarai region. This demand, however, contested with the slogan of the Madhes movement which claimed 'one Madhes one province' to be a 'federal and autonomous' region of their own (Jha 2017). Both the Tharus and Madhesis abundantly share the demography of Tarai region, along with people of other communities, but their movements confronted each other in claiming to be an ethnicity-based federal region during the constitution-writing process. Despite this, the Constitution was promulgated in September 2015 not letting the Tarai region form a separate federal province. Springing a surprise, both movements formed a joint alliance (*Samyukta Madhesi-Tharu Morcha*) to oppose the Constitution, which thereafter divided into many fractions and now the alliance has entered into mainstream politics along with the political parties (Sapkota 2017).

The *Kamlahari* and *Kamaiya*[2] systems have remained two prominent socioeconomic issues among Tharu community (Fujikura 2013). Both systems are historically interlinked. The term 'Kamlahari' is derived from Tharu word 'Kam+Lahari', which connotes work assisting labour that gradually becomes bonded to the service. As discussed earlier, poor Tharu parents used to send their daughters or sisters below the age of 18 years to work with landlords and other rich families in their own community or beyond for assisting in the household and field work on a minimum wage (*majduri*) or pay in kind (food grains including rice and wheat). Generally, parent and employer had an agreement (though oral contract in most cases) for one year to work as a *Kamlahari*. But, the employee was bound to work for many years without any formal payment and considerable wages. For decades, *Kamlahari* brokers came to Western Nepal during the *Maghi* festival[3] to buy girls to be sent away to work. The girls were supposed to be returned after a year, but few were ever voluntarily released by their landlords. Contrary to the promises, *Kamlaharies* were rarely allowed to attend school, nor have a chance to participate in any kind of social organisations or in public spheres. This *Kamlahari* system violated the rights of the girl-child. Once the girl-child started her life as a *Kamlahari*, a high risk of vulnerability and exploitation, both physically and mentally, often came into her life (COLARP 2016). Though they used to get opportunities for

[2] *Kamaiya* is a kind of bonded labour system which is based on the domestic and agricultural labour supply of male and adult Tharus. The system was historically practiced in mid-western and far-western regions of Nepal. Though the GoN released 18,291 *kamaiyas* from their bondage on 17 July 2002, the issue of rehabilitation is still unresolved.

[3] It is a popular annual festival among the many caste and ethnic groups in Nepal which comes in mid-January. Tharu people celebrate Maghi as their New Year Eve throughout the week where many decisions (including migration, marriage, selling or purchasing of family assets and bonded wage labour) take place in consensus with household members and relatives.

school education and some of them were also paid nominally, painful stories have been narrated in some ethnographic counts, e.g.:

> The reality is very different. *Kamlahari* girls are mostly used as slaves; rarely living as part of the family, they sleep on the floor in a separate area such as the kitchen. Fed with leftovers or rotten food, they work up to 14 hours a day. The girls are reported to be beaten, neglected, deprived of medical attention, forbidden to leave the house and are sexually assaulted (KidsRights Report 2014, p. 3).

## 3. GENESIS OF THE MOVEMENT

In earlier anthropological and ethnographic literature of Nepal, the *Kamlahari* system was taken as a constituent part of the *Kamaiya* system, in particular the cases where entire Tharu families became bonded, either in household activities or in farmlands. The political economy and the roots of the slavery were similar for both systems, irrespective of gender roles. most of the parents who used to remain as *Kamaiya* in their master's or landlord's homes, used to send their sister and / or daughter as domestic servants either at their own master's home or to the relatives of the master. They eventually became *Kamlaharies* (Maycock 2015; Sapkota 2014b). Till the early 1990s, due to persistent poverty, extreme alcoholism, illiteracy, debt and landlessness among the poor Tharus, it was one of the dependent livelihood strategies for survival. However, it came into wider public attention only after the People's Movement in 1990 which had neoliberal economic policies, and offered livelihood diversification and social mobility. The 1990s can be credited as the decade of the freedom movement of *Kamaiyas* and the *Kamlaharies* in which NSAs, including non-government organisations (NGOs) and political parties were largely engaged (Fujikura 2013; Rankin 1999).

The system of *Kamlahari* in theory should have been abolished with the *Kamaiya* system as was endorsed in Bonded Labour (Prohibition) Act, 2002. The Act prohibited bonded labour among *Kamaiyas*, declared all loans taken as null and void and all persons working as *Kamaiya* labourers free. However, the Act did not recognise *Kamlahari* as 'slavery'. Right-based agitations popularly arose with the rise of NSAs after 1990. Social movement groups started to raise the issues of the *Kamlahari.* It became a common right-based issue which further catalysed with the Maoist agenda during the 1990s. In 2006, *Kamlahari*-led organisations won a Supreme Court decision that affirmed the ban on slavery. Even after the political uprisings of 2006, the GoN was slow in enforcing the anti-*Kamlahari* laws and providing compensation for the victims. Throughout the campaign, an effective alliance developed among the movement actors, not excluding some sympathetic government officials and elected representatives. In effect, the efforts helped prompt the government to allocate scholarship funds to educate former *Kamlahari*

girls in 2012. Subsequently, a Joint Struggle Committee (JSC) was made which led frequent street demonstrations in western Nepal and in Kathmandu. This protest stirred public outrage and led to the GoN declaration in June 2013 of an end to the *Kamlahari* system (Sapkota 2017).

After long political turmoil, the promulgated Constitution of Nepal 2015 established a notion of 'representation and inclusion'. This notion was introduced as the guiding principles of the state, which largely addresses the movement agendas of the Tharus and other ethnic / regional groups (Part 4). The agendas of *Kamlahari* movement in particular can benefit and be further institutionalised through the Tharu Commission, which has a provision in the constitution (Part 27). Article 51 (j) of the Constitution adopts the policies of social justice and inclusion, which includes (sub-clause 6) the issue of rehabilitation of marginalised groups:

> ...to identify the freed bonded laborers, *Kamlahari*, Harawa, Charawa, tillers, landless, squatters and rehabilitate them by providing housing, housing plot for residence and cultivable land or employment for their livelihoods (Constitution of Nepal 2015, pp. 40-41).

The fundamental rights ensured in Part 3 (Rights to Life, Right to Freedom and Security, Right to Assemble Peacefully, Right against Torture, Inhuman and Degrading Treatment; Right of the Human Rights Defenders, Right to Education, Right to Freedom of Expression, Child Rights, Right to Health, Right to Education, and the Cultural Rights) are also vital to promote the rights and rehabilitation of the *Kamlahari* girls in their post-emancipation context. These rights are possibly affecting the contemporary *Kamlahari* movement in terms of its agendas and policy-level contestations. Thus, this narrative of the *Kamlahari* girls and the genesis of their movement briefly reflect a historical context. It includes the following four stages:

1. The genesis of *Kamlahari* slavery as a complement to the *Kamaiya* system;
2. The start of the *Kamlahari* movement with the formation of collective identity among themselves; and the subsequent campaigning of NSAs;
3. The emancipation and declaration of freedom for the *Kamlahari* girls with rehabilitation packages; and,
4. Post-constitutional efforts which guarantee the identity and mainstreaming of the *Kamlaharies* as 'marginalised groups', though subsequent policies are yet to be devised.

## 4. RESEARCH SITE AND METHODOLOGY

This study was conducted in two Village Development Committees (VDCs)[4] of Dang: Chailahi and Saudiyar. Having a total population of 552,583 in the district, the major caste/ ethnic groups include Tharu (29.52%), Chhettri (24.91%) and Magar (13.60%) (CBS 2012). The district falls in the Rapti zone of Province No. 5 and in the mid-western development region of Nepal. The district has a long history of peasant and land-based movements (Metcalf 2009), and is the major site of agitation for the Tharu movement (Sapkota 2014b).

The study villages were selected on the basis of the number of freed *Kamlaharies*, and the intensity of *Kamlahari* movement in the regions. Though there is no official record, there were 700 *Kamlahari* girls from Chailahi VDC and 453 girls from the Saudiyar before they were declared free in 2013. Regarding demographic composition, the Tharu population was in majority - 53% and 56%, respectively (CBS 2012). Chailahi VDC is a comparatively accessible plain region in the Deukhuri, with a network of national highways and high in-migration flow from Hill to Tarai. Saudiyar VDC belongs to the northern hilly region of the district, near the district headquarter, and less accessible through the road networks. Moreover, it is worthwhile to note that in March 2017, the Chailahi VDC was incorporated into Ghorahi Municipality, whereas the Saudiyar VDC was upgraded into Lamahi Municipality (Sapkota 2017).

Ontologically, the study followed a participatory approach and constructivist paradigm employing the qualitative tools of Social Science research. It is, therefore, assumed that the problem of *Kamlaharies* has been historically constructed within the given context of Tharus and other caste / ethnic groups in Nepal. It, then, conceives multiple world views of the bonded girls and their construction of knowledge rather than adopting a 'singular worldview' of the researcher. Participatory approach, along with a qualitative constructive world view is largely used in contemporary movement studies (Della Porta 2014; Willis 2007). Then, it explored the issues of the *Kamlahari* movement in the Tharu community and beyond (including changes in *Kamlahari* practice, livelihood strategies, and other issues of resettlement and empowerment). The researcher conducted two Focus Group Discussions (FGDs) in each study site, thus there were four FGDs in total. For the FGDs, the target groups included either:

[4] VDCs were the smallest administrative units of local government in Nepal. However, they do not exist today as the local levels have been restructured in the federal context as per the Constitution promulgated in September 2015. The GoN adjusted the former VDCs either as 'Municipalities' or 'Rural Municipalities' on 7 March 2017.

Former *Kamlahari* (in households, or in the hostels) conducted in Saudiyar comprising of only *Kamlaharies*.

a. Former *Kamlahari* groups / organisation, including movement actors conducted in Chailahi comprising of a mixed group.
b. Child club / network / girls groups conducted in Saudiyar comprising of a mixed group.
c. Leaders of civil society, NGOs and political parties conducted in Chailahi representing a group of non-*Kamlaharies* only.

The researcher further conducted Key Informant Interviews (KIIs): four KIIs in each VDC (eight KIIs in total), with purposively selected research participants:

a. Former *Kamlahari* (in households, or in the hostels) - two KIIs in each VDC.
b. Representatives of former *Kamlahari* groups or organisation, including movement actors – conducted one KII in Saudiyar with a male and another KII in Chailahi with a female former *Kamlahari*.
c. VDC male Tharu secretary – conducted one KII in Chailahi.
d. Representatives of civil society, NGOs and political parties – conducted a KII in Saudiyar with a non-*Kamlahari* (male).

Following phenomenological approaches (Yin 1994), the study has also employed one in-depth case study of a female ambassador, a *Kamlahari* girl who led the movement and framed it in a wider context. This case was further narrated by her as an autoethnography. Thus, the adoption of these qualitative methods (FGDs, KIIs and case study) eventually contributed in analysing contested issues and dynamics from the movement perspective. They were further triangulated to saturate reliability of the findings. The study was carried out from 2015-16, and the researcher collected primary data from the field from May-July 2015.

## 5. RESULTS AND DISCUSSION

Though many scholars (e.g. Gamson 1997; Horn 2013; Kuumba 2001) have considered gender as a crucial dimension of social movements, its particular nexus with the bonded labour movement, has not been discussed. Moreover, such movements are further subject to dilemmas in between opportunities of freedom and constraints which go hand-in-hand (Lyman 2016). From the viewpoints of the *Kamlahari* movement of Nepal, the findings discussed below reveal this kind of broader spectrum.

## 5.1. Limited Provisions and Disputed Numbers

The findings revealed that the number of *Kamlaharies* (and their full address) was the most debated issue both for the government and non-governmental actors. Though there was no clear figure about the number of *Kamlaharies*, official records of the FKDF claimed that about 3,000 *Kamlaharies* had been already freed in Dang, out of a total of 12,500 from all the affected districts of mid- and far-western districts of Tarai-Nepal. According to their claim, 324 were further to be freed (FKDF 2018). The present study, during the FGDs with parents of those girls, found that it was difficult to rescue them due to their wrong name and address which could not be found in the District Administration Office (DAO) of the Dang district. Moreover, the disappearing *Kamlahari* girls did not have any governmental identity cards, including citizenship card. Some *Kamlahari* girls were not identified and rescued as they were sent to India, or to cities of Nepal (including Kathmandu and Nepalgunj, in particular). Among the rescued ones, as the researcher observed, the number of successfully rehabilitated girls has not been updated, and even the data available seems contradictory. This might be due to the different working modalities of Civil Society Organizations (CSOs) and NGOs. With coordination of FKDF, the researcher met 13 rescued girls. They seemed worried about the rehabilitation package of the government in terms of education and promotion of livelihood. 'The problem of database', as stated by one of the research participants in Saudiyar, 'is as serious as many actual *Kamlaharies* are not included, while some non-*Kamlaharies* have been overtly registered in the list.'

## 5.2. Emergence of Actors

In the villages of Dang, it was evident that the newly freed *Kamlaharies* were struggling hard for their new livelihood. Most of them had different representative networks, including a number of saving groups and a few co-operatives and NGOs. For example, *Mukta Kamlahari Bikas Manch* (FKDF) was officially established in Lamahi *bazaar* (market) of Chailahi VDC in 2004, which was an induced organisation of many donor agencies, including Plan International Nepal and Search for Common Ground. This organisation particularly led the *Kamlahari* movement in Dang and surrounding districts. Even before their freedom in 2013, some of the *Kamlaharies* were rescued. It was surprising to the researcher to see that the emancipation of *Kamlaharies* could not become the main agenda of the Tharu movement. But, there were a number of organisations often registered as NGOs (Backward Society Education-BASE and Friends of Needy Children-FNC, in particular) and some local-level state officials/actors (e.g. District Child Welfare Board-DCWB, and DAO) played a leading role in freeing them. Even today, many of these organisations have been working with the rehabilitation and livelihood issues of *Kamaiya* and *Kamlahari*. For example, there were nine NGOs registered to work on these issues in Chailahi, while there were six in Saudiyar VDC.

Similarly, *Kamlahari* issues were becoming the project focus of many INGOs (e.g. National Youth Foundation, and Plan International Nepal) in both study sites, and some of them have been focusing on the issues of both groups, such as awareness raising and child rights, rescue and rehabilitation, education and livelihoods.

## 5.3. Glorification of Freedom

The significance of the declaration day is difficult to understate. During the field study, the researcher had the opportunity to participate in such annual events (in 2014 and 2015) where the celebrations were organised in the name of freedom and emancipation. However, what impact those programmes had, and what had been happening regarding the rehabilitation of the rescued / freed ones, were the things less discussed though. Many of the programmes and celebrations were sponsored by donors, and the involvement of government officials was also ensured with some financial incentives. It is worth mentioning that these programmes were rarely organised by the mainstream Tharu movement (such as by Tharuhat Joint Struggle Committee-TJSC; nor the Tharu Welfare Society-TWS).

Another interesting reflection from the study is that issues of the *Kamlahari* have now changed in form, but in essence, a number of political spaces have been created in the broader Tharu movement to include the emancipatory strategies and slogans for the oppressed groups within the Tharu community. The most striking was that the historicity of this bondage system kept the Tharus as a slave class, and some of the Tharu landlords also became supporters and practitioners of this system. Theoretically, this could be labelled as a discourse of the subaltern in the South Asian context (Guha & Spivak 1988; Majumdar 2015). But, a contested question, as the field observations reflected, still remained unanswered: whether the *Kamlaharies* could speak as subalterns for themselves, or some elite groups would have to speak as their representatives. In similar context of the *Kamaiyas*, however, Maycock (2015) reflects that they are 'hegemonic' at home, while becoming 'subaltern' outside. A former *Kamlahari* asserted a never-ending question to the researcher:

> What did I get from my [past] *Kamlahari* life, and what am I getting now with the present [life]? I lost my parents years ago during their *Kamaiya* life… I don't have any property nor school certificate and any skills to earn with. What could I do? What? (Personal conversation with the researcher, 20 June 2015).

## 5.4. Issue of Settlement and Rehabilitation

The problems associated with the issues of settlement and rehabilitation of the newly freed *Kamlahari* girls was gaining protest sentiments in the community. Despite the relief packages and rehabilitation schemes provided during emancipation and thereafter, the

settlement was so miserable that it could not satisfy the growing needs of their family. During the FGDs, most of the participants reflected that there were no livelihoods options except doing menial wage labour, even though the *Kamlahari* girls were either rejected being under age or paid very less. According to them, the low wage was further coupled with exploitation in many forms, including physical and psychological harassment by the contractors. The wage relation, which the researcher would call 'chain of labour', flourished not only in the Tarai region, but also in the Indian states. The researcher met with some Tharu boys and girls from the Deukhuri region of Dang who were doing wage labour in housing companies in Kathmandu. Some Tharu wage workers, including the former *Kamaiyas* and *Kamlaharies* of Dang were also found in construction projects in Kathmandu. Going abroad was difficult for most of the Tharus as conditioned by their poor access to the human resource recruiters in Kathmandu, limitation of age and literacy background, and lack of money. A few research participants, representing the civil society, further highlighted the issue of *Kamlahari* practice in hidden forms even after their freedom in 2013, i.e., some girls had been victims of trafficking for different purposes to Indian markets (in hotels and circuses). Despite this claim, there are very few studies and strategic priorities on this dimension of the *Kamlahari*.

As the study reflected, the reintegration of the *Kamlahari* girls and their empowerment has some political implications too. Many political parties, including the Nepali Congress (NC), Communist Party of Nepal (United Marxist Leninist (CPN-UML), Communist Party of Nepal (Maoist Centre) (CPN M-C) and some Tarai-based parties had kept the agenda of *Kamlaharies* in their election manifestos in 2008 and 2012. The local-level party leaders in the villages joined the movement campaigns. Despite their activism, they seemed more apparent either during the peak of the movement or at the time of election. Very recently, these issues have been also reflected in the commitments for the general and local elections of Nepal held in 2017. Despite this, the study findings suggest that the settlement and rehabilitation packages were not as effective as the local people expected. They need to be well-articulated by the GoN in a defined target-setting, along with partnership of movement actors and civil societies at the grassroot level.

## 5.5. Lack of Identity Cards

Due to lack of identity cards, many of the *Kamlahari* girls did not get support from the state, including scholarships, rehabilitation incentives and facility to reside in the hostel during their schooling. They had also been denied inclusive opportunities for entry into the state bureaucracy as allowed in government policies for public services. In Nepal, identity cards have been offered to most of the freed bonded labour (including *Kamaiya* and *Haliya*), but it has been a debatable issue in the case of *Kamlahari*. Therefore, the researcher took the issue of identity as one of the critical dimensions of the *Kamlahari* movement. Though, there had been a provision of 'the freed *Kamlahari* ID card

distribution committee' in Dang and other districts for the affected ones initiated soon after the declaration in 2013, the committees remained dysfunctional. During the field study, it was evident that the committee of Dang had only issued cards to ten *Kamlahari* girls in the beginning, and remained silent four years thereafter.

The issue of identity distribution for the *Kamlaharies* was also contested. On the one hand, government officers (DDC and DAO) wanted to allocate the identity card with different categories (A, B, C and D) depending upon the years of bondage and physical condition at the time of rescue. According to their claim, it would benefit all the vulnerable ones. They also claimed that the NGOs and local elites were 'playing a game' to distribute the identity cards. On the other hand, the *Kamlahari* movement activists and local partner NGOs have focused on the broad-based distribution of identity cards without any categorisation of the *Kamlahari* girls irrespective of their status and service period. Some research participants lamented that the identity card has been a political slogan for the local political leaders, and therefore, it could not be resolved without consensus among the movement actors and the political parties. Very recently, however, the Ministry of Land Reform and Management, GoN, has enacted a Directive, and thus, initiated the ID cards distribution campaign since 1 November 2017 (Chaudhary 2017). Accordingly, only 80 *Kamlahari* girls have received their identity cards in Dang district alone till the writing of this paper (January 2018). This reflects again a delayed process and bureaucratic hurdles in distributing cards, even though many of the freed *Kamlahari* girls have been displaced from Dang, and some have even died. The *Kamlaharies* who did not have any legal official documents or identity cards to reflect their former life of bonded labour face many problems, particularly for government support.

## 5.6. Desire of Continuous Support

Research participants consistently discussed expectations of continuous support from NSAs, particularly from NGOs to the *Kamlaharie*s. However, the researcher also observed that government support and incentives (in terms of rescue, legal help, scholarship and tutorial support, etc.) granted to the *Kamlaharies* have been less credited. Due to increase in rescues, a kind of psychology, however, has developed among the movement leaders that they are the sole authority to define, rescue and rehabilitate the *Kamlaharies* in the region. It was interesting to observe cases where some bonded girls were rescued by some social groups (e.g. FKDF) before their formal emancipation proclamations by the government in 2013. But, most of them were unhappy with the government services, particularly in terms of their education and rehabilitation in society. One of the other experiences the researcher saw was that even the girls who freed themselves or had been freed by their owners and the *Kamlaharies* rescued by other NGOs were 'not' treated as equally as the girls who were rescued by NSAs. The state actors were quite reluctant in this issue which largely shadowed the problems of

*Kamlahari* girls who were out of exposure. The hostels hosting freed *Kamlaharies* were facing such dilemmas, e.g., the Lawajuni hostel at Narti of Chailahi Dang, where 230 students were residing in 2014. Expenses of the hostel management were not audited and decisions were not documented properly. In a public consultation with the researcher, it was found that the activities conducted in the hostel were not transparent, either to the School Management Committee (SMC) nor the public. The same person who was the head of the school and president of an NGO (Social Welfare Association Nepal-SWAN Nepal) — which was working in the *Kamlahari* sector — was blamed for unethical control of resources and students of the hostel. In being so, the donor, Plan International and its partners, had sidelined the role of the SMC and the District Education Office (DEO).

Even though some educational programmes were targeted by the government for the *Kamlahari* girls (e.g. in terms of scholarships), they were seriously marred by funding leakages and shortages. The Ministry of Education formulated Education Support Guidelines in 2011 which addressed the concerns regarding scholarship and hostel facilities for the freed *Kamlaharies.*[5] In the beginning, the document had endorsed scholarship provision for the freed *Kamlahari* girls making their specific definition as bonded labour and the status of being freed as on 13 April 2010. In rule number 6.3, there is a provision of scholarship to be delivered by the respective schools for dress, stationery and hostel facilitation from primary to higher level (6.3.1).[6] As per the official record of the DEO of Dang, out of a total 3,000 school-going girls' status, 2,500 had received the scholarship in Dang from 2013 to 2015, while 500 were missing out due to their incomplete documents. Moreover, some of the research participants during KIIs and FGDs also shared that every year, there used to be a larger allocation of financial and technical support for the socioeconomic development and capacity development of the freed *Kamlahari* girls (e.g. in DEO, DDC and DCWB). Due to lack of proper coordination between governmental agencies and NGOs, a significant amount of budget remained unutilised and became frozen.

[5] This Guideline was further amended in 2014 and again in 2017 in the name of 'Scholarships Management Guideline for the Schools'.

[6] There are two types of scholarship supports: (a) Scholarship for the freed *Kamlaharies* going to schools/colleges from their own home (i.e. non-residential): Nepali Price Rupees (NPR)150 per month for ten months for 1-8 grades; NPR 180 per month for ten months (total 1800) for 9-10 grade; NPR 500 per month for ten months for 11-12 grade; and NPR 1000 per month for ten months for higher studies; and (b) Scholarship for the freed *Kamlaharies* residing at hostels and enrolling at the schools/colleges (i.e. residential): NPR 3000 per month for ten months (NPR 2500 for the hostel charge of lodging and food, and NPR 500 per month for maintenance of personal needs and hygiene). 1 USD=115.20 NPR as standardised transaction in 14 September 2018.

## 5.7. Going Beyond the 'Mainstream'

The narratives of the *Kamlahari* girls in Dang reflect a contradiction with the mainstream view that the Tharuhat movement corresponds with anti-Pahadi[7] sentiment and resembles the 'ethnic territory' of the Tharu communities. For the *Kamlahari* with whom the researcher discussed their experiences, the issue is not that simple. For example, the researcher was told that there were both good and bad Tharu and Pahadi landlords. There were also reflections that the *Kamaiya* and *Kamlahari* movement should not have been considered the mainstream Tharuhat movement as the existing leadership of the latter did not consider their agenda integral to Tharuhat agenda. These conversations implied that no easy generalisations can be made here. One's position in the system as *Kamlahari* (and landless) was more formative than ethnic associations with a Tharu landlord. This raises the question of whether class identities have more influence on *Kamlahari* femininity than ethnic identities or the masculinity within the Tharu community and beyond. This has been a challenging journey as maintained by one research participant in Dang:

> The *Kamlahari* system was a devil of our society in the past, and it was treated as the problem of Tharu community only. But its movement and liberation, now have become our asset and identity of local communities of different caste / ethnic groups in Dang… We are really indebted to such courageous girls.

The following case study of Urmila Chaudhary further illustrates how a previously bonded *Kamlahari* girl could get wider exposure to the national as well as international level and become a Girls' Ambassador:

> My family used to be in bonded labour ─ *Kamaiya* ─ which continued from my grandfather to father and then to my brother. In 2002, bonded labour system was outlawed, and my brother also got freed. My father took loan from one of the persons from the hill when he was sick. Because of that debt I was sent to Kathmandu as bonded labour. I was not even six years old then. I was bonded at Jawalakhel, Lalitpur, in one of the Rana's houses. They belonged to the royal family. For 11 years, I worked as a bonded labourer. I was freed at the age of 17. There is still a good relationship between me and the bonded labour home. During the 11 years as a bonded labourer, I visited my home only three times. My owner did not

[7] The people/community who migrated to the Tarai low-land from the northern hilly up-lands are locally recognised as *'Pahadi'* or *'Pahadiya'* (hilly people) by the Tharu and other indigenous community of the Tarai.

give me permission to go home. I was not in contact with anyone in my village for four years so they thought I was lost.

During my *Kamlahari* life, the food I took and the dresses I wore were of very low quality. I used to cook for all the family members and guests of my owner, but I could not take the food of my choice. I needed permission to do everything. They used to throw foods in the dustbin if I cooked without their permission. I had to give them honour such as using 'your highness' in my language. There used to be milk and cornflakes for the dog, but for me there was rice that was also given to pigeons. They used to have good quality rice, but for me they used to cook vegetables with little oil and more chilies. When I was bonded, I got food but didn't get any opportunity of education. I would drop the children of my age to school. I didn't have any idea about how to cross the road and because of this problem, sometimes I used to stay whole day on the road and I used to cry. I have the experiences of bondage inside the home for five years. Unused toilet was my room where I was kept like a prisoner for many years. I was freed on 1 Magh 2063 (11 January 2007). I didn't get any money from the owner when I was freed. My brother and VDC secretary of my home village have played a great role in this. After I was freed, I was involved as a protester in anti-slavery movement. We collectively developed Freed Kamlahari Development Forum (FKDF) and extended its networks outside the district as well. As a protester, I was threatened by many people. But I did not melt down.

I got to know there is provision for bonded labour to study. I studied a bridge course and joined in class 5 due to my higher age. Teachers upgraded me to class 7 after being first in class 5. I studied up to class 9 by staying in a hostel because I used to get many threats for studying at home and bonded labour freeing process. Later, my story was published in German language. Now, it has been translated in nine languages. After publishing this story, various institutions helped me and I started to study at a private school and I completed my SLC from a government school. Now I have just completed intermediate level. I am an ambassador of teenage girls as announced by Plan International Nepal and other agencies. I have had frequent opportunities to visit many countries, including Germany, United States and New Zealand. I am inspired by Malala

> Yousafzai. I wish to study more. I want to study law and work in legal system in favour of women and children.

## 5.8. Effectiveness of Social Spheres

Social spheres of the *Kamlahari* movement have been broadened in Dang in terms of both the state as well as NSAs. Evidently, child rights were central to all of them. The rescued *Kamlahari* girls became engaged in child clubs, Village Child Protection Committees (VCPCs), girls groups, and some of them were also the founding members of female-headed co-operatives as well. The local NGOs (including FKDF, BASE, and SWAN) and supporting INGOs (Plan International) and line-agencies of the government (VDCs, District Child Welfare Board-DCWB) offered project interventions, both as joint ventures as well as alone. Capacity building for child club members was maintained through different kinds of training, including leadership development, street drama performance, and wall magazine production skills development. Moreover, orientation to Badhghar,[8] parents and freed *Kamlahari* girls on child right issues seemed more contextual. All these activities played an effective role in raising awareness of children's rights to development, participation and protection. During the study period, except for a few new child club formations, mostly already existing child clubs were strengthened. In the process of re-integration of former *Kamlahari* in the community after rescue, child clubs were found to be the most relevant forum in the community. As a social forum, child clubs have ensured rights of participation for children to learn and share their opinion, opportunity for developing leadership, personality, creativity, communication skills, and learning about child rights.

During an FGD, the child club members said that they have learned different skills, such as organising events like school enrolment campaigns, conducting meetings, raising public issues of the *Kamlahari*, and orienting the parents against child marriage and child labour. Child clubs, including the freed *Kamlaharies* had also developed the capacity to speak in front of many people. During an FGD conducted with members of the Phulbari child network helping girl teenagers of Gadhawa (Dang), a former *Kamlahari* said:

> At the beginning, when I was freed, I could not talk to anyone. I used to be afraid of seeing people and goods around me. But now I talk to everyone, go everywhere and see everything. I always miss my parents. We have nothing. We are poor and landless. I want to talk

[8] Also called *Bhalmansa*, the *Badhghars* are locally nominated / elected village heads of the Tharu community. Though this is a specific indigenous practice of social control among the Tharus, the practice is still equally adapted by the other caste and ethnic groups in the villages. In recent years, the roles of *Badhghars* (traditional leaders and the newly elected leaders (at local levels) are, however, contested and overlap each other.

> about poverty, and about my past life! (Based on the personal conversation with the researcher, 18 June 2015).

Indeed, the skills learned in child clubs and VCPCs would contribute in leadership development and self-esteem of the *Kamlahari* girls. The research participants complained that only few *Kamlaharies* had received such membership and were provided physical support, and some of them were granted similar types of trainings again and again. Nevertheless, to offer an inspiring example from Dang, Urmila Chaudhary, who was kept as *Kamlahari* during her childhood, now has exposure nationally and internationally as a Girls' Ambassador for the Child Rights. Shanta Chaudhary is another example who engaged in political movement after being freed from the *Kamlahari* life, and has now become a member of the federal parliament of Nepal. Though these examples seem like an illuminating canvas for the emancipation of the *Kamlahari* girls, yet ironically, there are many other former *Kamlaharies* who did not participate in any kind of public spheres or social institutions, and were excluded from such opportunities of capacity building and reintegrating into the larger society.

## 5.9. Risk of Return into the Kamlahari Life

There was an emergent issue of risk of returning to the *Kamlahari* life even after being freed. In the FGDs with the parents of *Kamlaharies*, it was found that some of the rescued girls were still in the process of returning to the *Kamlahari* life due to extreme poverty in the family and social hatred in the community. In an in-depth interview conducted with a *Badhghar* of Lagadi village in Lamahi, it was reported that some rescued *Kamlahari* did not like to go to school even if they were of school going age. Those girls who did not go to school got married at an early age of 13 or 14 years. Similarly, the rescued *Kamlahari* girls did not prefer to stay with parents whose home environment was not favourable in terms of food and lodging, or the parents had disabilities due to disease or old-age complexities. Those rescued girls had already returned to the *Kamlahari* life again. Rampant poverty and recurrent food insecurity, given the lack of income-generating skills, some parents wanted to send their daughters as *Kamlahari* just for mere survival. During the field study, a few research respondents expressed their anxiety that they would not get any support either from outside, from the government nor any other non-governmental agencies; and therefore, they seemed more convinced to send their girls back to the *Kamlahari* life again. Some reported how instead of sending children as *Kamlahari*, parents used to send them for menial work with construction contractors even though the child's age was below 15 years. Here is a direct quote from a household head during an interview in Gurgaun, Dang district:

> I have learned a lot from my life. I got freedom from my *Kamaiya* life. Then, my daughter became free from *Kamlahari* life with the help of many people and organisations. But what is happening now?

> [silence...] My wife is suffering from cancer of the uterus. Now who will assist me? My wage is not sufficient to afford the treatment. I have no additional property, even to get loans. This is how I am thinking about extra sources of income, so my daughter [freed *Kamlahari* who used to go to school] is the one who can contribute and earn money for her family (Based on a personal conversation with a former *Kamaiya* in Dang, 21 July 2015).

## 5.10. Metaphysical Questions

The fundamental metaphysical question for the *Kamlahari* movement and its issues lie on the extreme form of poverty, landlessness, inequality and illiteracy of the Tharu people themselves. Though a comprehensive caste-ethnic database system could hardly be found in Nepal, and this is beyond the scope of this present study, the researcher noted in the field that these political-economic conditions have been historically compelling slavery and bonded labour among the Tharus. For instance, Nepal Multidimensional Exclusion Index (MEI) revealed that the Tharus are an 'excluded group' levelling at 0.303, though the national average of the Index was 0.22 (Bennett & Parajuli 2013). Emerging ethnic elitism within the community is another critical issue in this regard due to which most of the educated and upper class Tharu men have particularly benefitted from the different kinds of opportunities in society. This has resonance with bonded labour in the rest of South Asian countries, and the way families give their male children to *madrassahs* (religious schools) in Pakistan, and the poor Brahmin families given their daughters to some temples in India (Joseph 2014; Metcalf 2009).

Linked to this issue of exclusion was slavery which further affected the livelihood and capability enhancement of the freed *Kamlaharies*. Indeed, while the *Kamaiyas* were freed in 2000 and the *Kamlaharies* were declared free in 2013, no policy was devised nor was the rehabilitation programme adhered to by the state / government. Different kinds of INGOs and CSOs were working in the name of support for the freed ones, though there was a duplication and over-stratification in project designing by these actors. The *Kamlahari* girls were either being settled with their parents or running independent vocational shops after getting training from the local NGOs. Most of them were struggling to find sustainable income sources in the competitive market. The cases of sexually exploited *Kamlahari* were either dismissed without any decision or were delayed in the customary legal process.

The social service system and security were very weak and mediocre because of inadequate policy support, feudal structure of the local bureaucracy and inaccessibility of the poor to the authorities. A simple question always pushed this researcher regarding the nature of the emancipation in the broad spectrum of social life. Political and economic issues of liberation were also raised. The post-emancipation discourse has empirically

failed to address the structural issues of exploitation related to the *Kamaiya* and *Kamlahari* systems in Dang, enabling it to evolve and continue in alternative forms. This finding is quite similar to Karki (2001, p. 125) who put 'grassroots movements as a structural issue' in the context of *Kamaiyas* struggle towards freedom. This relates more broadly to the consistent lack of engagement with issues of land, debt, rehabilitation, and the nexus of ethnic identity and class structure in rural Nepal. To quote a former *Kamlahari* girl who narrates the structural question of 'why':

> I had a question about how I became a *Kamlahari*. Why I was kept, and not the daughters/ sisters of other Tharu people and other non-Tharu community? Why I could not go to school like my other friends? What is this? Whom should I blame: God or family or society? Or my fate was responsible! How did people come to buy me, and my parents had to sell me during the *Maghis*? (Based on a personal conversation in Ghorahi, 3 August 2015).

In short, findings discussed above can be summarised to reflect the limited provisions and rehabilitation packages for the freed *Kamlaharies*. The rehabilitation has been further affected by the poor database system, lack of identity cards and monitoring and supervision of targeted projects. Though various NSAs were involved in the *Kamlahari* movement, it could not become the mainstream agenda of the Tharu movement which was very powerful from 2006 onwards during the Constitution writing process in the country. The research also finds that issues like higher education, promotion of self-employment and sustainable livelihoods could be critical factors in the rehabilitation of the *Kamlaharies* in their own communities. The rehabilitation package of the government should, therefore, be extended to minimise the risks and vulnerabilities of the freed girls. As there are a number of gaps and uncertainties in the outcomes of the movement, the findings suggest that the *Kamlahari* movement has not ended or disappeared in totality. Rather, it has been influenced by emerging NSAs and elites in the communities both in Chailahi and Saudiyar of Dang district.

## 6. CONCLUSION

The study concludes that the problem of *Kamlahari* bonded labour was a socioeconomic and political issue embedded both in the Tharus and non-Tharus. Though, they had been declared free in 2013 after a long series of *Kamlahari* movements, the rehabilitation package launched by the government is not effective in terms of educational support, reintegration in the family and the promotion of sustainable livelihoods. While there has been space for this movement, it could not be more organised as was in the previous years. Along with the new Constitution, there have been expanding opportunities for the *Kamlahari* girls through a number of progressive reforms both at the policy level

(including inclusive agenda as fundamental rights) and development interventions (including social security, rehabilitation and incentives). This study further observes that those opportunities were uncertain for many of the *Kamlaharies*, particularly in terms of lack of identity cards, poor educational attainment and vocational skills, weak access to local bureaucracy, NGO-based campaigning and the subsequent risks of return to the previous *Kamlahari* life due to social insecurity and extreme poverty. Moreover, the ways and processes of how the opportunities are being extended at the grassroots level seems the most challenging issue as they could dilute the achievements of the whole movement. Though the present study was based on Dang district of Nepal and its two VDCs, the findings encourage widening the scope of the issues of *Kamlaharies* both in the Tarai region and in Nepal as a whole.

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# Women's Access to Justice: Ending Violence against Women in Pakistan

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## ABSTRACT

*Intimate Partner Violence (IPV) continues to be the most pervasive form of Violence against Women (VAW) in Pakistan, manifested through abuses varying in nature from physical, sexual, or economic to psychological form of violence. While these acts of violence occur at the micro level and are often explained in terms of individual or household characteristics, the macro landscape of access to justice, rule of law and governance mechanisms also shape the degree to which such acts continue to happen. Despite positive developments in the legal arena and policy landscape related to VAW, serious violations continue to take place which question the effectiveness of the mechanisms and structures in place to curb and prevent VAW. Based on an in-depth policy and legal analysis and drawing from a high-level discussion on barriers to women's access to justice, especially related to IPV, this paper teases out the gaps and weaknesses that hinder women's access to justice. The paper also elucidates a number of policy recommendations, which if adopted, can help ease women's journey to achieve justice.*

**Key words:** Violence against women, intimate partner violence, gender issues, justice, governance.

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## INTRODUCTION

Violence against Women (VAW) is a reality in Pakistan and is deeply entrenched in the country's patriarchal system. Despite legislative developments to improve women's rights and mitigate violence against them through various national and international Conventions, the actual state of affairs remains discouraging (Qaisrani et al. 2016). VAW manifests itself in various ways and may include: i) domestic violence by family members, including Intimate Partner Violence (IPV) through physical, sexual, economic or psychological abuse; ii) sexual violence including rape, sexual harassment, prostitution, human trafficking; iii) harmful cultural practices that may include honour killings, early marriages, forced marriages, bride exchange, dowry related violence; and, iv) some new and emerging forms of violence such as cyber stalking, cyber harassment, and non-consensual/revenge pornography. In Pakistan, as in the rest of the world, the most pervasive form of violence is IPV, often perpetrated by a male partner against a female partner (Karmaliani et al. 2017).

Gender inequities and imbalanced power relations shape the prevalence of VAW. While many acts of violence may occur at the micro-level, they are often shaped by broader macro-level realms such as access to justice, rule of law, and investment in the social sector (Fu 2015). The interplay of these factors shape victims' pathways in their pursuit to justice. Unfortunately, in Pakistan, the process of access to justice is equivocal and fraught and requires immediate corrective measures to ensure that justice delivery is unbiased, speedy, and based on equality (Aurat Foundation 2016). This calls for a systematic change in social perceptions, legal frameworks, accountability in terms of implementation of existing provisions and institutional strengthening through targeted policy actions.

Based on the current literary discourse on barriers in access to justice vis-a-vis VAW and a high-profile panel discussion at the Sustainable Development Policy Institute's Twentieth Sustainable Development Conference (6 December 2017), this paper aims to:

1. address the factors causing VAW in Pakistan.
2. propose ways to improve access to justice for the protection of women's rights.
3. enhance compliance to national and international commitments related to women's rights.

## 1. POLICY AND INSTITUTIONAL LANDSCAPE

### 1.1. National

Pakistan has no dearth of legal provisions that aspire to protect women's rights and provide justice to those who experience violence. Table 1 provides an overview of all the national level initiatives taken for protecting women's rights in Pakistan since 1973. At

the national level, the Constitution of the Islamic Republic of Pakistan (1973) ensures provision of fundamental rights and equal opportunities to every citizen without any discrimination on the basis of gender, race and religion. Similarly, for ending any type of violence against its citizens, the state has devised and promulgated a number of legal instruments such as laws, acts, ordinances and required amendments in the existing legal documents. These legal instruments, apart from addressing gender neutral violence issues, also focus on women specific violations under certain clauses. For instance, the Pakistan Penal Code (1860) under its Section 375 intends to address numerous forms of VAW including assault and rape; Section 496A deals with the criminal imprisonment; Section 506 is about intimidation of women; and Section 509 takes into account issues related to invasive attitude towards a woman's modesty.

Similarly, Family Laws Ordinance (1996) also takes into account disputes related to marriage registration, divorce rights of wives, and issues pertaining to polygamy without the wife's consent. Likewise, the Criminal Law Amendment Act (2004) also deals with the brutal killing of women in the name of honour. It explicitly categorises honour killing as murder that does not allow punishment exemptions under any circumstances. In addition, it also declares the acts of *Vani* (forced marriage of a girl based on a crime committed by a male relative) and *Swara* (child marriage, especially tied to blood feuds) as penal offences punishable with up to ten years imprisonment. Also with the promulgation of Criminal Laws Amendment Act (2006) as referred to in the Constitution, the violation of women's rights within existing legal instruments was countered due to prolonged advocacy by national and international groups and actors. Due to this amendment, rape cases can now be prosecuted under criminal law rather than the *Zina/Hudood* Ordinance.[1] This amendment will inhibit further victimisation of rape survivors and subjection to punishment in case of insufficient evidence to accuse the perpetrator.

The Council of Islamic Ideology (CII), a constitutional body that advises the government to ensure laws are in accordance with the Islamic principles, has played a critical role in shaping the legal landscape related to women's rights in Pakistan, although not always in favour. The Council was responsible for recommending the endorsement of *Hudood* Ordinance in 1979, which required a rape victim to produce four eye-witnesses to testify to the crime, and also denounced DNA as evidence for rape cases (Anwar 2016). More recently, the Council declared the Women's Protection Law as 'un-Islamic' (Ibid.).

[1] *Zina* or *Hudood* Ordinance was a law enacted in Pakistan in which rape was not distinguished from adultery, thereby, criminalising rape victims.

**Table 1: Indicative List of National Policies and Legal Provisions that address VAW in Pakistan (1973 to date)**

| Categories of National Laws against Gender Violence | Efforts Undertaken to Address Gender-Based Violence |
|---|---|
| Constitutional provisions | ▪ The Constitution of the Islamic Republic of Pakistan, 1973 |
| Legal provisions | ▪ Pakistan Penal Code, 1860: Addresses several forms of violence against women including assault, rape (section 375), the criminal detention or intimidation of women (section 496A and 506), and insulting a woman's modesty (section 509).<br>▪ Family Laws Ordinance, 1996: Requires marriage to be registered and a woman to be aware of her rights on divorce and in situations where the husband marries a second time.<br>▪ Criminal Law (Amendment) Act, 2004: Recognises that killings committed in the name of honour are murders and must be booked and prosecuted as murder, and that they will not receive any exemptions.<br>▪ The Protection of Women (Criminal Laws Amendment) Act, 2006: This law allowed for rape to be prosecuted under criminal law, rather than *Sharia* law, and reverses many of the harsh punishments introduced by the brutal *Hudood* Ordinances relating to adultery (laws in Pakistan enacted in 1977 as part of the 'Sharisation' or 'Islamisation' process of military ruler Zia-ul-Haq).<br>▪ Criminal Law (Amendment) Act, 2011: Deals specifically with the offence of using acid to cause injury.<br>▪ Criminal Law (Amendment) Act 2016: Deals with offences on the pretext of honour.<br>▪ Criminal Law (Amendment) Act 2016: Deals with offence of rape.<br>▪ National Plan of Action on Human Rights |
| Special laws | ▪ Child Marriage Restraint Act, 1929<br>▪ Dowry and Bridal Gifts (Restriction) Act, 1976: Places restrictions on the number of gifts to be given to a bride and groom, mandates all dowry items to be vested property of the bride and requires all dowry gifts to be itemised.<br>▪ The Protection Against Harassment of Women at the Workplace Act, 2010<br>▪ Acid Control and Acid Crimes Prevention Act, 2011<br>▪ Prevention of Anti-Women Practices (Criminal Law Amendment) Act, 2011: Prohibits depriving women from inheriting their property; makes forced marriages of women an offence; and marriage of a woman to the Holy Qur'an (if she is considered unholy and/or evil).<br>▪ Domestic Violence (Prevention and Protection) Bill, 2012<br>▪ Women's Protection Act, 2016 (passed in Punjab)<br>▪ Hindu Marriage Act (2017)<br>▪ Prevention of Electronic Crimes Act, 2016<br>▪ Various Provincial Laws |
| Policy frameworks | ▪ Provincial Gender Equality Frameworks<br>▪ Women's Empowerment Packages and Initiatives |

*Source:* Karmaliani et al. (2017)

Apart from these legal provisions, special laws to address women-specific issues also exist in Pakistan. These include Child Marriage Restraint Act (1929) that functions to inhibit child marriages, and Dowry and Bridal Gifts (Restriction) Act (1976) that deals with the illegal dowry demands posed by the groom or his family members. The Protection against Harassment of Women at the Workplace Act (2010) is devised to ensure a safe and secure working environment for women. Prevention of Anti-Women Practices (Criminal Law Amendment) Act (2011) outlaws depriving women from inheriting property; makes forced marriages of women a legal offence; and outlaws marriage of a woman to the Holy Qu'ran. The Domestic Violence (Prevention and Protection) Bill was passed in 2012 by the National Assembly to counter domestic violence through monetary compensation for victims, punishment in the form of fines or jail to the perpetrators. Followed by the most recent legal instrument passed in the province of Punjab on Women's Protection Act (2016) (Karmaliani et al. 2017).

At the institutional level, the National Commission on the Status of Women (NCSW) was established in 2000 to work towards women development, empowerment and gender equality by identifying gaps and proposing recommendations to effectively implement women's development initiatives. Apart from the NCSW, Provincial Women Development Departments are responsible for making provincial policies and plans of action along with meeting national and international commitments.

## 1.2. International

The country is signatory to nearly all global agreements and conventions on VAW. In 1996, Pakistan ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) that stresses upon the signatories to treat domestic violence as a violation of human rights and to integrate international criteria and standards into national policies and legislations (GEP 2012).

Careful analysis of the policy and institutional environment indicates that issues pertaining to VAW are considerably complex and deep rooted in Pakistan. They are entangled with cultural practices, social norms and religious beliefs of communities due to which they face inertia when it comes to any proposed change. These complexities can be gauged through the demonstrations in response to the Punjab Women Protection Bill in 2016. The bill was quoted as 'un-Islamic', hence unacceptable by religious leaders.

Despite the existing legal instruments and structures to protect women's rights, serious violations continue to take place in Pakistan. This situation is further exacerbated by the lack of implementation of existing laws (True 2012). Moreover, prior to the 18$^{th}$Amendment, Pakistan had a National Plan of Action in place to address such issues. However, after the devolution of power, each province formulated its own Plan of Action. Due to this non-uniformity, strategies face hindrance in their utility, particularly for

victims seeking justice in different provinces other than their birth origin. Moreover, poor implementation of laws is subject to lack of clarity or presence of strong accountability mechanisms to keep a check on who is responsible for enforcing these laws.

# 2. MAJOR FINDINGS LEADING TO FORMULATION OF POLICY OBJECTIVES

## 2.1. Factors leading to Violence against Women

As discussed earlier, IPV is the most prevalent form of VAW in Pakistan and is often perpetrated by a male against a female partner. Karmaliani et al. (2017) found that drivers of IPV in Pakistan vary at different levels (individual, household, and community); and hence may require a different set of strategies and instruments to address the issue. Poor socioeconomic conditions, unemployment, excessive use of drugs, lack of education, and observing violence while growing up are major drivers of IPV at the individual level. At the household level, particularly in a large extended family system, interference of in-laws and family conflicts play a vital role in IPV. Polygamy is another factor that may contribute to the prevalence of IPV among married couples in Pakistan (Ibid.).

While at the community level, social taboos, norms and standards practised for many decades contribute to the major drivers of IPV. Drivers influenced by culture define behaviour and response of both genders towards IPV. In Pakistan, VAW is often justified under the guise of misinterpreted religious teachings, beliefs and practices (Qaisrani et al. 2016). Social norms are distinctly defined for women in terms of their roles and responsibilities which, if not executed as desired, often result in violence against them with the intention of 'keeping women in their place'. Economic dependence of females on their male partners further weakens the case for women's liberty, movement and right to live as they desire. In a patriarchal society, where men are placed in command, the masculinity of husbands is also gauged by the level of suppression he practices on his partner. Similarly, the femininity of a wife is measured by her submissive attitude. The prevalence of early childhood marriage is also one reason to preserve the submissive attitude of young girls who are in the phase of mental and physical development (Karmaliani et al. 2017).

Wide use of Information and Communication Technology (ICT) tools and non-traditional sources of communication, such as social media and the cellphones also play a vital role in exacerbating VAW in Pakistan. Adolescent girls are becoming vulnerable to all types of violence from a very early age. Moreover, since the concept of 'having a relationship' between a girl and boy before marriage is taboo in Pakistani society, it has led to an increase in vulnerability as it inhibits open and informal discussion on the subject. Unfortunately, social norms justify various types of violence towards those who may have such a 'tabooed relationship'.

## 2.2. Access to Justice

Domestic violence and IPV are the most common forms of violence experienced by women, and since they are considered a 'private' or 'domestic' matter, the initial response of a victim is to discuss with a family member. Family members will often support reconciliation. However, reconciliation does not ensure justice as displays of abuse may continue even after a compromise has been made (Karmaliani et al. 2017). If the abuse is perpetual and beyond the family's control, the victim may find the courage to seek justice through formal structures that are available to her. However, cultural beliefs often make women reluctant to seek formal support. Often formal responses are only taken when the life of the victim is in danger (Ibid.).

While there are many laws in Pakistan (Table 1), there is little justice (Qaisrani et al. 2016). Despite the existing legal frameworks, the ideals of a free, fair and safe life for women remains unachieved and their access to justice continues to be chequered (Aurat Foundation 2016). The same year as CEDAW was signed, Pakistan passed the infamous *Hudood* Ordinance as part of the Pakistan Penal Code with severe implications for justice to victims of rape and honour killing. As per the *Hudood* Ordinance, conviction of rape victims requires multiple eye-witnesses or evidence and honour killing was termed as a compoundable offence. Both aspects favoured the perpetrators, most often men, over women victims. These laws were later amended in 2006 to address the issue of discrimination against women.

An analytical review of the conviction rates and statistics available on VAW in Pakistan displays the lack of effectiveness of enacted laws and policies. As per the statistics available with the Human Rights Commission of Pakistan (HRCP), between 2004 and 2016, 4734 cases of sexual violence, 15,222 honour crime cases, 1535 burning cases, 1843 cases of domestic VAW, 35,935 cases of suicide and 5508 cases of kidnapping of women were reported. It should be noted that these statistics are taken from police records and only portray the situation based on reported cases. Underreporting is a major detriment to the actual scenario, and is one of the main challenges faced by institutions working towards easing access to justice for victims of violence. In addition to paucity of data, lack of disaggregation of statistics based on gender and type of violence is also an impediment in understanding the extent of different types of VAW. For instance, the Domestic Violence (Protection and Prevention) Act of 2012 clubs together all forms of domestic abuse with no distinctions for IPV and other forms of gender-based acts of violence occurring within a victim's home.

Laws provide a framework and a pathway towards justice. Ensuring access to justice relies on compliance to these laws, policies and agreements. To put the legal discourse into action, frameworks for implementation are required, which are often not in place or have loopholes that can easily be manipulated against the victims. In her pursuit of

justice, a female survivor of violence has to approach a combination of laws, systems and procedures – all engrained in the highly patriarchal moral code of Pakistan's society and shaped by systematic misogyny (Naqvi and Syed 2015). At every step, from filing a case to the rounds of visits for the sluggish judicial process, barriers arise that not only question a victim's credibility and repute, but also sometimes lead to withdrawal of the case. Women, who are courageous enough to seek justice from the available legal authorities, are often looked down upon in society and considered partly responsible for the abuse (Pakeeza 2015).

The victim first interacts with the police to file a First Information Report (FIR) to initiate her case and often has to face disbelief, harassment and ridicule at the hands of the male-dominated police staff, especially in smaller towns and villages. While the Punjab police have taken a commendable initiative of launching Women Helplines in Lahore, the limited publicity of this initiative has curtailed its effectiveness and it has not been able to break the social taboos associated with women seeking justice against violence. The judicial process is slow and suffers from delays creating space for the prevalence of parallel legal systems that provide speedy decisions. However, in most cases these parallel legal systems are male-dominated and are marred by orthodox and discriminatory traditions and customs that may actually lead to pervasive VAW.

Access to justice for women in Pakistan is also shaped by the state of rule of law in the country, the absence of which often contributes to the lack of governance leading to non-compliance, and thus, ineffectiveness of policies, laws and conventions (Zaman and Khan 2012). Female judges are limited in number and judiciary, and for the larger part, lack deep insight in cases of Gender-Based Violence (GBV). Institutional weaknesses are visible at all tiers in the process of access to justice and proceedings of cases are often shaped by political interference.

All these factors lead to inconsistent and unequal access to justice for women who have experienced violence. This creates lack of trust in the system and its processes, and undermines all the positive developments in improving the status of women in Pakistan.

## 3. RECOMMENDATIONS

Through this paper, the government's commitment is evoked to fulfill its policy obligations and social contract to the victims of VAW and the state is urged to ease the process of access to justice by taking action regarding the initiatives mentioned below:

1. Access to justice is much more than just prosecuting crimes, it requires holistically addressing gender inequalities present in society. Curbing VAW requires an effort to combat the deep-rooted problems that form the basis of such violations of human rights. Institutional responses are important, however, the most important change required is enlightenment of the mind set by the shackles of orthodox customs.

**Reforms should be introduced into the curriculum of the education sector by including topics on human rights, gender equality and the importance of respecting both women and men.**

2. Easing access to formal justice services requires elimination of the barriers that lead to underreporting. Women may be more confident in coming forth with their cases if they can approach females, instead of males, at the service institutions. This calls for **recruiting more female staff in formal service institutions such as police forces and courts of justice** and ensuring their sensitivity in understanding issues of VAW. Furthermore, the CII should increase the number of its female members to improve sensitivity to women-related issues.
3. Delayed justice processes owing to workload on limited number of judges and lack of importance given to VAW issues, which are otherwise considered 'domestic' or 'personal', need to be addressed by readjusting the system to address women's concerns. The Punjab government's initiative of **establishing special courts for addressing VAW** in Lahore is commendable. Depending upon the success, other provincial and district governments should replicate this initiative, which in principle aims at addressing issues faced by victims of violence. Furthermore, the judicial system should be made affordable for women in terms of time and money so that its access is based on equality.
4. Policies and laws are only as effective as their implementation. There is an immediate need to **ensure compliance to national and international commitments** made by the government to protect the rights of women and provide them justice in case of violation of these rights. Strengthening institutions is vital to catalyse their progress towards achieving this objective. **Accountability mechanisms need to be made more rigorous and responses of relevant institutions should be made more effective.**
5. There is also a need **to garner political will and commitment** to comply with the agreements, policies and laws and ensure speedy service delivery that would help in regaining the trust and confidence in the formal structures established to provide justice to women.
6. **Addressing IPV would require culturally-resonant definitions for Pakistan is a prerequisite**. These definitions should be drafted in consultation with all major stakeholders such as anthropologists, analysts, researchers, civil society, media, and academia to cover the regional as well societal dimension and drivers of violence.
7. In Pakistan, customary/cultural laws are misinterpreted as Islamic laws which are subject to male supremacy over females. In order to address this confusion, there is a need to launch **advocacy campaigns to re-orient communities in relation to evolutionary mutations in religious beliefs.** This advocacy campaign should be

launched in **collaboration with religious scholars and experts** to address issues pertaining to VAW.

8. In order to bring social change, civil society, media and think tanks/research institutes can play an important role. **As pressure groups and watchdogs of human rights violations, they have to take a proactive role in highlighting real time and well-researched issues related to VAW through the lens of ethical standards.** Media and civil society should work in collaboration with think tanks/research institutions which can provide empirical evidence for wider dissemination. Cooperative and collaborative ventures (Memorandum of Understanding for technical inputs) between these actors can play a beneficial role in addressing VAW. **Media should allocate free time for public service messages related to VAW at prime times** to reach maximum number of men and women.
9. There is a dire need to **expand focus of gender empowerment and VAW interventions from female to male segments of society. Tailored interventions for young boys and girls should be implemented through regular religious and modern school systems.** Motivation to be an agent of change for a better and just society should be generated.

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# Cyber Security Imperatives and Pakistan's Readiness: A Brief Overview

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## ABSTRACT

*With increasing use of the Internet and its free for all availability, the cyber space is expanding making it easier for hackers to target infrastructure and services. The next war between adversaries will be a cyber war. The country stronger in cyber warfare will win without even taking to the battlefield. This paper describes the types of cyber threats; advantages cyber-attackers have; categories of cyber-attacks; threats to data; and information confidentiality, integrity, and availability (CIA). It also highlights the possible targets of cyber-attacks; and the type of leadership needed in the cyber security and cyber war environment. The study aims at creating awareness in Pakistan's policymakers and other stakeholders about prevailing cyber threats and making recommendations to mitigate the dangers. Finally, some Pakistan-specific recommendations are included to mitigate the threats to the country's cyber security.*

**Key words:** Cyber space, cyber security, cyber war, espionage, asymmetry, cyber leadership, Computer Emergency Response Team (CERT).

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## 1. INTRODUCTION

The expanding cyber space, increasing prevalence and severity of cyber-attacks are posing a serious threat to the global economy and national security. According to the Hiscox Cyber Readiness Report 2017, the annual loss to the global economy in 2017 was around USD 450 billion due to lack of stringent security measures; and it is likely to increase to USD 2 trillion by 2019. In 2007, Syrian air defence was reportedly disabled by a cyber-attack moments before the Israeli Air Force demolished an alleged Syrian nuclear reactor (Tyaki 2013). The asymmetry and anonymity of cyber-attackers calls for coordinated international efforts to respond to this threat. While declaring a national emergency to deal with the threat of cyber-attacks, former United States (US) President Barack Obama (2016) said:

> The increasing prevalence and severity of malicious cyber-enabled activities constitute an unusual and extraordinary threat to the national security, foreign policy and economy of the United States.

The expanding cyber space which involves the enhanced use of Information Technology (IT) and Telecommunications (Telecom) enables hackers to misuse and disrupt the use of cyber space. Attack space for hackers has also expanded to the extent that they can, at will, disable networks. Just imagine what will happen if the financial, electric grid system, transport and military command and control (C2) system of a country is paralysed?

In recent years, there have been thousands of cyber-attacks targeting infrastructure and services. In many cases, hackers used ransomware to mint money from victims. It is, therefore, vital that countries, especially developing ones like Pakistan, acquire the capability of not only defending against such attacks, but also the ability to launch counter cyber-attacks. This is easier said than done because in most cases the attacker's identity is difficult to establish. The nature of the Internet makes it possible to hide behind its free-for-all infrastructure. This is especially so when cyber-attacks are state-sponsored. Nevertheless, countries must adopt measures for effective cyber security. There are several definitions of Cyber Security, of which the most oft quoted one is:

> The body of technologies, processes and practices designed to protect networks, computers, programs and data from attacks, damage or unauthorized access. In a computing context, security includes both cyber security and physical security.

It is also called the CIA Triad (confidentiality, integrity and availability), and not to be confused with the Central Intelligence Agency of the US. Cyber security includes computer networks, infrastructure, software programmes, military C2 systems and utility

services which must be protected from disruption, hacking and cyber-attacks. As technology advances at a fast rate, household devices will also be vulnerable to hacking and disruptions. This paper explains various categories of cyber-attacks, cyber threats and their objectives, the advantages cyber-attackers have, possible targets, type of leadership needed to cope with threats and mitigation strategies recommended by various cyber professionals. The paper provides a brief overview of Pakistan's current 'readiness' to cope with cyber threats. Finally, it makes specific recommendations for policymakers and other stakeholders to meet the prevailing threats to the country's cyber security.

## 2. CYBER-ATTACK CATEGORIES

This section focuses on the CIA Triad or categories which cyber-attackers focus on during an attack. Rouse (2014) discusses the following components of cyber-attacks:

### 2.1. Confidentiality

Extensive connectivity of the Internet and its inadequate security, makes it is possible for hackers to steal information. Confidentiality implies that unauthorised elements will not have access to information that is exchanged between those who should have such access. The information will not be intercepted and codes will not be broken. Civil and military organisations stand to lose a great deal if confidentiality is compromised. Challenges will become serious if information is stolen at a massive scale, like design of combat aircrafts, missiles, industrial patents and intellectual property (Ibid.).

### 2.2. Integrity

'This is the unauthorized modification of information… Integrity attacks can involve sabotage of data for criminal, political and military purposes' (Geers 2011, p.137). Official websites can be attacked by installing wrong information. In military C2, wrong instructions and data can be passed vertically and horizontally. Weapon systems can be given wrong commands. Security barriers may open up for criminals and terrorists.

### 2.3. Availability

'Cyber-attackers prevent the authorized users from gaining access to the systems they require to perform certain tasks. This is also referred to as denial of service (DoS)' (Ibid.: 21). Any DoS of banking system, power or transport system can have serious repercussions, especially if it is done for prolonged periods.

## 3. CYBER THREATS

According to Geers (2011), a hacker will seek the following objectives in a cyber-attack:

## 3.1. Espionage

Objective: to steel data and information of highly sensitive political and military communications. This can be done remotely from anywhere in the world. Adversaries continually collect intelligence to destabilise a victim's economy and keep an eye on military preparedness. This can have devastating consequences for the victim.

## 3.2. Propaganda

Objective: to intercept the Internet and communicate tailored information behind enemy lines. This can create confusion and spread false and fabricated news which could affect morale. Well-planned propaganda can create great uncertainty resulting in depression and fear. Lin and Kerr (2017, pp. 9-10) quote Randal Marlin's famous definition of propaganda:

> The organized attempt through communication to affect belief or action or inculcate attitudes in a large audience in ways that circumvent or suppress an individual's adequately informed, rational, reflective judgment.

In any future conflict, cyber space will be used as an effective platform for propaganda by the adversary. This can be done by spreading false rumours. Internally, even a terrorist and extremist can use this tool to brainwash a large audience. Such actions can create chaos, confusion and uncertainty. It is said that Hitler was an expert in propaganda warfare by spreading big lies. Obviously, the victims will have to devote significant effort to neutralise such propaganda and this may not always be possible.

## 3.3. Denial of Service (DoS)

Objective: to deny the use of required information, data or computing resources. This is done with electromagnetic interference, creating current/voltage surges or physical destruction of equipment. Any disruption in banking services, power and transport system will bring life to a standstill. Denial in the use weapon systems will result in enemy's walkover without a fight.

## 3.4. Data Modification

Objective: to compromise the integrity of important and sensitive data through website defacement or by introducing fictitious data in the victim's database. This is done with a high level of anonymity. In such situations, data analysis will give wrong findings/results. This could seriously affect planning and consequent implementation.

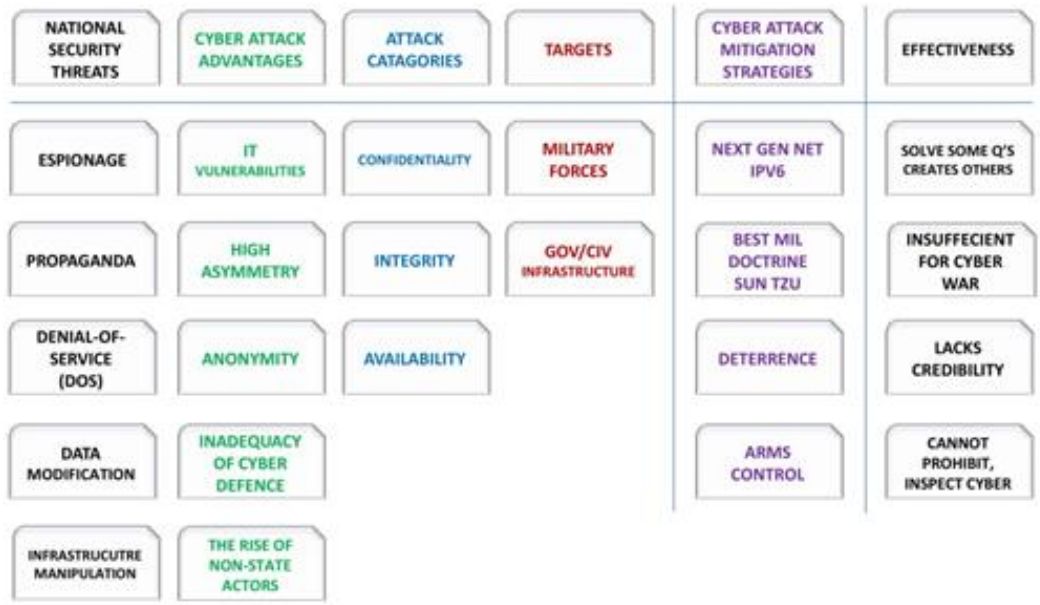
## 3.5. Infrastructure Manipulation

Objective: to degrade vital infrastructures like electric grids or available bandwidths and computer networks. This can also be done by the service providers. Any unauthorised

modification in civil/military infrastructures/use will have devastating effects on their working. Considerable effort will be needed to recover and restore the systems. According to ASC (2016, p. 29):

> Not all attacks are about theft or destruction. A more sinister course is the manipulation of data in places such that machines can be controlled or wrong information reported to human operators without their knowledge.

**Figure 1: Influencing Factors related to Cyber Security**




*Source:* Geers (2011), p. 133.

## 4. ADVANTAGES TO CYBER-ATTACKERS

Given nature of the Internet and the medium through which information passes, potential cyber-attackers enjoy various advantages. Geers (2011) lists the following ones:

### 4.1. Vulnerability

Because of the maize-like design of the Internet, hackers are able to find paths to enter sensitive sites. Proliferation of communication technologies facilitates such attacks. This advantage will continue till such time the Internet is made completely safe which does not seem possible, because it is available to all. No one gets any privilege or priority for its use.

## 4.2. Asymmetry

Cyber-attacks vary in nature. No two attacks are similar. It is difficult to foresee the nature of the next attack since it is very challenging to find a pattern. Hackers and cyber-attackers' habits based on previous practices are also hard to predict.

## 4.3. Anonymity

Spread and nature of the Internet enables hackers to route their attacks via countries other than the origin. For example, they can route their attack through a country with which the victim has poor relations. Thus, it is difficult to ascertain the identity of hackers. Anyone with the required expertise can be a hacker and remain safe from identification. In 2010, the US and Israel launched a cyber-attack on Iranian nuclear sites using a sophisticated and maliciously developed malware called Stuxnet. The Iranians remained under the impression that the operation of their equipment and machines was erratic. Some revolving machines would run slow, and then suddenly pick up speed, go out-of-control and burn out.

## 4.4. Inadequacy of Cyber Defence

Given such advantages available to cyber-attackers and the absence of any binding international treaty, states are at a great disadvantage. Organisations are finding it very difficult to acquire cyber defence capabilities. Technical experts in cyber security are difficult to find and even more difficult to retain because of their circulation value. Although some universities in advanced countries train cyber leaders and managers, there is still a dearth of cyber defence experts.

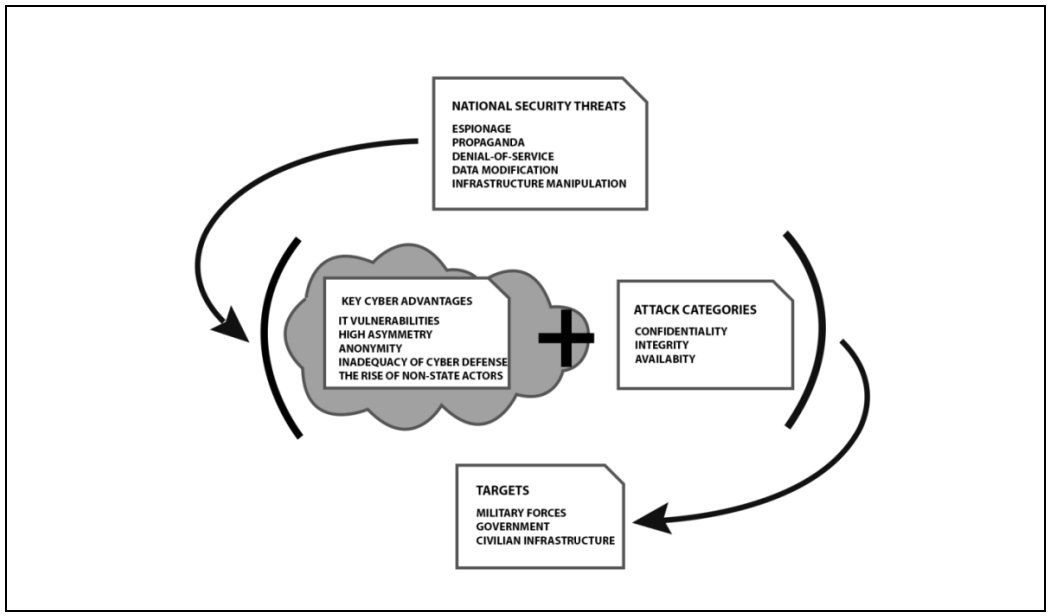
## 4.5. Rise of Non-State Actors (NSAs)

The Internet is available to all. The asymmetry and anonymity enjoyed by hackers and cyber-attackers facilitate its use for espionage, propaganda, crime and military aggression. There is no international law to control the illegal and wrongful use of the Internet. Non-State Actors (NSAs) like civil society, economic/social entities and terrorists can use the Internet for their ulterior motives. NSAs are not under any obligation to respect laws. They can hack computers and important information at will. Terrorists and extremists can be a big problem in cyber security. Terrorist organisations are now well-equipped for such attacks and they are not under any legitimate control.

Terrorists or state-sponsored and non-state sponsored actors engaged in cyber-attacks to pursue their objectives can also use cyber space to deny essential services like banking, transport and power grids. Cyber terrorists, in the garb of cyber spies, can steal sensitive and vital information (Theohary and Rollins 2015). There are cyber thieves and cyber warriors who may be agents of other nations on their payrolls. Figure 2 shows how cyber

space offers attackers numerous advantages that facilitate and amplify the three traditional attack categories of confidentiality, integrity and availability:

**Figure 2: Key Cyber-attack Advantages**




*Source:* Geers (2011), p. 135.

## 5. CYBER-ATTACK TARGETS

According to Geers (2011), cyber-attacks of strategic significance do not occur every day. In fact, it is likely that the most powerful cyber weapons may be saved by militaries and intelligence agencies for times of international conflict and war. In any future war or conflict, the element of cyber-attack will certainly be introduced. Some of the institutions that may use this tactic or could become potential targets include the following:

### 5.1. Military Forces

Their goal would be to disable the adversary's weapon system and C2. DoS would target the victim's communication system. The aim would be to destroy, disrupt, deny, degrade and deceive. Also, a military would aim to defend its own system from such attacks. Most militaries collect information on their adversary's deployment, readiness, supplies, logistics and reinforcements etc. The US Department of Defence (US DoD) has been conducting result-oriented exercises and games in cyber-attacks and defence. In 2008, the US DoD was a victim of a cyber-attack on its sensitive systems. The US now has a good organisation on ground to deal with cyber-attacks. Lin and Kerr (2017) write:

> From the standpoint of traditional military conflict, The United States is unmatched by any other nation. Other nations have taken note of US conventional military prowess and some other asymmetric methods of confronting the United States…Cyber warfare is one asymmetric counter.

It appears that the concept of nuclear deterrence has now gone in the background. Besides, nuclear weapons can be destroyed, but cyber weapons because of their asymmetry, anonymity and nature of cyber space cannot be destroyed. Therefore, in any future conflict military communications, C2 systems and logistics would be very vulnerable targets. Even the US and the other advanced countries have taken full stock of this situation and put necessary counter measures in place.

### 5.2. Government/Civilian Infrastructure

The targets could be an adversary's financial sector, industry, transport and power supply. Government functioning could be seriously hampered. Decision-making would become extremely difficult, and disable the defender from engaging in a longer conflict. This could also impact and destroy national morale.

## 6. CYBER LEADERSHIP

According to Francesca Spidalieri:

> Cyber defense requires not only information technology experts with computer science, electrical engineering, and software security skills, but also professionals with an understanding of political theory, institutional theory, behavioral psychology, ethics, international law, international relations, and additional social sciences…the pillars of our society… are often led by individuals with extremely limited exposure to cyber issues and the existential threats they pose…(CSFI n.d., p.6).

In the same report by CSFI (n.d., p. 8), the Committee on professionalising the US' cyber security workforce, highlights that:

> Because, cyber security is not solely a technical endeavour, a wide range of backgrounds and skills will be needed in an effective national cyber security work force.

The report recommends the following four aspects that senior cyber leaders should master - Knowledge, Skill, Abilities (KSAs):

- A senior cyber leader should possess soft skills as well as come up to technical expectations required in cyberspace.

- He / She should master the 'executive management competencies to interact with the board of directors and other stakeholders.'
- Interdisciplinary competencies are needed for making timely and sound decisions affecting the mission, business functions and processes.
- 'Cyber-centred competencies are needed to provide the greatest technical insight and decision-making support to the organisation' (Ibid.).

Academic institutions and universities have to play their part in grooming / producing cyber leaders. In advanced countries like the US, some universities are already implementing programmes in cyber leadership. This is being done with the aim of producing cyber leaders who would be able to 'effectively communicate complex technical matters in a manner that other senior leaders can understand.' Such programmes train future cyber leaders 'to take initiative, motivate, exhibit creativity and innovation and provide sound, seasoned judgment.' However, a large number of interdisciplinary competencies should be included in the curricula. These programmes also include cyber-centred competencies.

## 7. MILITARY LEADERSHIP IN CYBER WAR

Sun Tzu's doctrine of war appears to cover a cyber war. The concept is applicable even after 2,500 years:

> [He] advised military commanders to avoid unnecessary destruction of an adversary's infrastructure. The best leaders can attain victory before combat is even necessary. Hence, to fight and conquer in all our battles is not a supervene excellence. Supervene excellence is breaking the enemy's resistance without fighting (Geers 2011).

Commanders in cyber war will need a mix of leadership qualities and traits required for conventional war and working knowledge of Information Technology (IT), computer networking and data security. Cyber warfare requires timely and sound decisions. The commander must be able to think on his feet and make quick decisions. He must be able to understand the technical language and be able to communicate in that language. A commander who would be able to seize the initiative would be in a better position to influence the conflict in his/her favour.

Some advanced countries foresaw the need to raise cyber commands many years ago. The US commenced this exercise in the late nineties. Following are some of the important features of the US Military Cyber Command (USCYBERCOM):

> USCYBERCOM plans, coordinates, integrates, synchronizes and conducts activities to direct the operations and defense of specified Department of Defense information networks; and prepare to, and

> when directed, conduct full spectrum military cyber space operations in order to enable actions in all domains, ensure US / Allied freedom of action in cyber space and deny the same to our adversaries (US DoD 2010, p.1).

The US Army, Navy and Air Force have their own cyber commands. The USCYBERCOM brings together all components of the three forces that work on cyber issues. In 2014, it employed 60,000 personnel. Its headquarters is co-located with the US National Security Agency (NSA) for better planning and coordination. 'This allows the two agencies to share resources at the field level', such as the 'hundreds of PhDs in Mathematics, Computer Science, Engineering, and other fields who work there' (Singer and Friedman 2014, p. 134). Cyber command works on three fronts, 'cyber protection forces that will defend the military's own computer networks; combat mission forces that will support the mission of forces in the field; and national mission forces that will aid in the protection of important infrastructure' (Singer and Friedman 2014). According to *The Strait Times* (2017):

> The Us Army will soon send teams of cyber warriors to the battle field as the military looks to take the offensive against computer networks. While the Army's mission is 'attack and destroy', the cyber troops have a slightly different goal. Not everything is 'destroy'. The cyber soldiers have been integrated in infantry units and will tailor operations according to commander's needs. The Army has for the past three years conducted training for such operations at a huge center in Southern California.

## 8. CYBER-ATTACK MITIGATION STRATEGIES

Singer and Friedman (2014) enunciate the following principles for cyber-attack mitigation:

- Build capacity to work under degraded conditions.
- Build resilience to adapt to adverse conditions. The system must recover quickly.
- Learn lessons for safe guard against future cyber-attacks.

Some actions that can be taken when attacked:

- Quickly lock down valuable information.
- Outward facing Internet services should / could be shut down.
- Organise to 'fail gracefully'.

> Resilience is about understanding that different pieces fit together and then how can they be kept together or brought back together when under attack. The best solution is not only a matter of attitude or

organization; it's about people and practices (Singer and Friedman 2014).

Geers (2011, p. 140) suggests the following mitigation strategies:

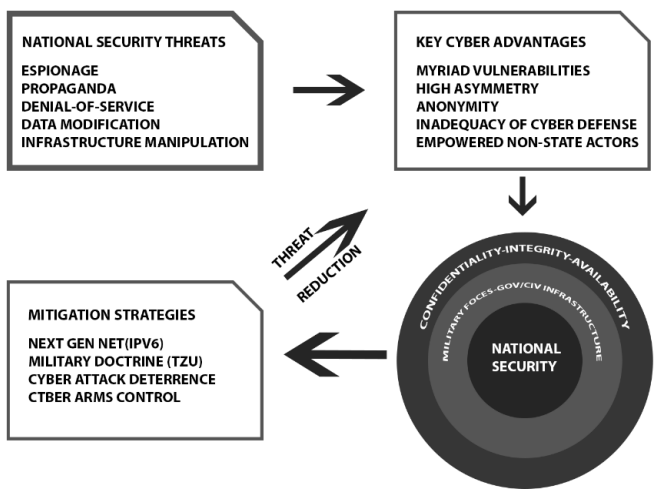
## 8.1. Internet Protocol Version 6 (IPv6)

This version has replaced the IPv4 version as the language of the Internet. It not only solves the world's shortage of computer addresses, it has enhanced security. However, the security feature is optional which most organisations may find inconvenient to adopt. Despite its security features, the attackers would be able to exploit its vulnerabilities because of the expanded 'attack surface' as a result of increased computer addresses.

## 8.2. Military Doctrine

No matter how much a military doctrine builds in flexibility and adaptability, cyber-attackers can launch attacks on military infrastructure. According to Geers (2011, p.140) even 'Sun Tzu's Art of War which is renowned for its flexibility and adaptability to new means and methods of war has great difficulty subsuming many aspects of cyber warfare.' Figure 3 is a causal loop diagram that shows how cyber-attack mitigation strategies are designed to reduce the impact of cyber-attack advantages with the ultimate goal of reducing the threats to national security via cyber space:

**Figure 3: Causal Loop Showing Mitigation Strategies, Cyber Advantages and Threats**




*Source:* Geers (2011), p. 139.

## 8.3. Computer Emergency Response Team (CERTs)

ENISA (n.d.) recommends the establishment of a national/governmental Computer Emergency Response Teams (CERTs) which should be involved in risk management. A national CERT can play a leading role in safeguarding critical infrastructure. It can coordinate the working and activities of organisations and various sector CERTs. It can also act as a point of contact during cyber-attacks. It can provide early warning to countrywide CERTs. The key to success of this mitigation strategy is full cooperation between the government, private sector, Internet service providers and mobile operators.

## 8.4. Readiness Pillars

According to the ACS (2016) given below are important readiness pillars:

*8.4.1. Education and Awareness*

Education in cyber security should start from schools. To prepare cyber security professionals is a long process especially when the technology is fast changing and the cyber space is quickly expanding. So far, there is lack of awareness among the public and private sector in Pakistan. For awareness, the government should take the lead and manage strong awareness programmes.

*8.4.2. Planning and Preparation*

There should be a strong understanding of the cyber threats and risks involved. A good management system should be in place. All stakeholders should have proper Standing Operating Procedures (SOPs) in place.

*8.4.3. Detection and Recovery*

Critical and vital infrastructures should be intrusion-tolerant and resilient. Breaches should be quickly detected and timely corrective actions taken. Detection and recovery should be the responsibility of CERTs trained and ready to meet any exigency.

*8.4.4. Access Control in Network Security (NAC)*

NAC approach should be adopted in computer security that attempts to unify end-point security technology such as anti-virus, host intrusion protection, and vulnerability assessment, user or system authentication and network security enforcement.

# 9. SUN TZU'S ART OF WAR AND CYBER SECURITY

Sun Tzu's 5th Century military strategy known as *The Art of War* is so flexible that it is even applicable to cyber security. Madsen (2017) highlights its following principles which are relevant to cyber security:

## 9.1. Know the Enemy and Know Yourself.

This is an important principle of military leadership. Even during peace time, intelligence gathering about the enemy's military preparations and his war plans are gathered. At the same time, one's own strengths and weaknesses are analysed and preparations are made to counter enemy threats/attacks. In cyber security, this means understanding how a hacker is likely to operate. What are his/her strengths and resources? How are one's own systems and infrastructures protected? Does one have trained professionals and resilient infrastructures? How can one overcome weaknesses?

## 9.2. All Warfare is based on Deception.

In military strategy and tactics, deception is an effective weapon of war. Deception gives one an edge because the enemy would not know where the attack will be and with what strength. Cyber-attackers use methods that are based on deception. To gain sensitive information, hackers may pose themselves as heads of organisations. Untrained and unsuspecting staff members will be tricked into divulging secrets and sensitive information. Thus, cyber-attackers and hackers may achieve their objective through stalking and phishing. Intrusion deception is a new approach to cyber security built on the classic philosophy from the *Art of War*. Sun Tzu said that 'you should appear weak when you are strong and strong when you are weak.' A website can appear weaker, and yet actually be stronger.

## 9.3. Attack Him Where He is Weak, Appear Where You are Unexpected.

This is the principle that the attacker will follow. Untrained employees would be the weak link. Attackers will also search other paths to enter organisational systems and infrastructures. This again boils down to the strategy of training employees in cyber security. Organisations should have competent security experts. There should be full intra-agency and inter-agency coordination; and post-attack learning exercises from hacking experiences.

# 10. WHERE DOES PAKISTAN STAND IN CYBER SECURITY AND CYBER WARFARE?

In relation to offences committed by any person or service providers and punishments for various crimes, the Parliament of Pakistan on 22 August enacted the Prevention of Electronic Crimes Act, 2016 legislation which also covers cyber terrorism, cyber stalking, spamming and spoofing, etc. Most importantly, it lays down preventive measures which include constituting CERTs with the following functions:

- 'The Federal Government may constitute one or more Computer Emergency Response Teams (CERTs) to respond to any threat against or attack on any critical

infrastructure, information systems or critical infrastructure data or widespread attack on information systems in Pakistan.

- A Computer Emergency Response Team constituted under the above sub-section may comprise of technical experts of known expertise, officers of any intelligence agency or any sub-set thereof.
- A computer emergency response team shall respond to a threat or attack without causing any undue hindrance or inconvenience to the use and access of the information system or data as may be prescribed' (GoP 2016).

Following up on the Prevention of Electronic Crimes Act, 2016, a comprehensive implementation plan was prepared by the CERT of Pakistan Telecom Authority (PTA).Typical services offered by a CERT include:

- **Reactive:** This is the core component of CERT designed to respond to threats and attacks.
- **Proactive:** Designed to avoid incidents and to reduce their impact and scope when they do occur.
- **Security Quality Management:** Designed to improve the overall security of an organisation. Other organisational entities such as IT or technical audit can provide these services, but participation of CERT in these services improves their effectiveness.

The PTA CERT framework is about what needs to be done to protect critical information and infrastructures. The plan lists responsibilities of PTA licensees, and defines the critical information assets and the critical information infrastructure that must be protected. The licensees are required to set up an internal CERT which will immediately come into action in the event of a cyber-attack. The CERT will also enforce protective measures. In fact, this is required by all organisations, not only by the licensees.

## 10.1. PTA Responsibilities

PTA CERT is supposed to be a dedicated team with its own budget to coordinate with all licensees and keep itself updated on information security situations and provide support. It is also meant to coordinate with other organisations; and provide the following care services:

- Incident analysis
- Incident response support
- Incident response coordination
- Coordination with global CERTS
- Coordination with academia
- Vulnerability and artifact response coordination
- Alerts and warnings

- Announcements
- Security-related information dissemination
- Awareness building, education and training.

The plan lays down resource requirements of CERT including human resources, equipment and other related infrastructure. It comprehensively lays down duties and actions to be taken by a CERT. A comprehensive set-up has been planned ranging from Information Security Analysis Centre to Country Wide Cyber Security Operations Centres. The PTA has done solid work in devising an elaborate plan to cope with the ever increasing incidents of cyber threats and cyber-attacks. The plan is open to revision and updates as the cyber situation evolves globally. However, it is not known how far the plan has been implemented and whether or not the proposed organisation is on ground. Whether or not PTA licensees have CERTs, whether the proposed infrastructure like Information Security Analysis Centre and Country Wide Cyber Security Operations Centres have been established are unknown variables. Also, what is being done to train/groom cyber security leaders and managers?

## 10.2. Pakistan Military Cyber Command

Pakistan military functions are network-centric. Due to hostile regional neighbours, other NSAs and forces which are bent on destabilising, weakening and even breaking up Pakistan, the military is vulnerable to cyber-attacks. Any future war is likely to be a cyber war. An adversary rich in cyber warfare technology will win without even taking to the battlefield.

# 11. WAY FORWARD

Before anything else, the world needs an international arms control treaty for cyber space. This can be done along the lines of the Chemical Weapons Convention (CWC) of 1997. Such a treaty may, at least deter state-sponsored hacking and cyber-attacks. The International Telecommunication Union (ITU) should be mandated by the United Nations (UN) to regulate the Internet. Previous such moves were opposed by powerful countries like the US. These measures are difficult to implement because of the nature of the Internet. However, given political will of world powers a beginning can be made.

The Internet should be made more secure. Although, IPv6 is an improvement over IPv4, it is still not the answer to hacking and cyber-attacks. The telecommunication technology is advancing very fast and additional security features can be added to make it more secure. Building firewalls by countries is not the answer to the problem of cyber security as this would restrict the use of the Internet. Advancing technology can make computer infrastructure designs more resilient. This would enable systems to endure security threats and recover quickly after a cyber-attack. This would mean intrusion-tolerant infrastructures. Coordination and information sharing among the government and civil

agencies and Internet service providers will help in taking joint measures to recover quickly and learn lessons from such attacks.

Another important trend is Cloud Computing where individuals and organisations instead of using their own infrastructures/resources purchase outside services. The organisations do not run their own servers. Even militaries of some countries are using it. The providers of cloud computing take care of cyber security. Organisations and individuals lack cyber security expertise and hiring and retaining them is expensive. Cloud Computing service providers have trained cyber security engineers to limit hacking and attacks.

The threats of cyber security and cyber war will continue to hover. To become cyber-resilient, countries are enhancing their talent pool of professionals in cyber security. This requires a national level approach. Colleges and universities will have to produce cyber leaders and managers. For Pakistan, the government, the private sector and the military must collaborate and coordinate in this endeavour.

## 12. POLICY RECOMMENDATIONS FOR PAKISTAN

This paper makes the following recommendations based on Yasin (2017):

- Develop comprehensive legislation covering individual and state sponsored cyber-attacks/cyber warfare. Although there are laws on cyber crimes, they do not cover organised cyber-attacks and state-sponsored attacks.
- A draft Cyber Policy exists, but a revamped Cyber Security Policy is needed. This should include goals, objectives, systems, organisations and responsibilities.
- A full-time, combined workforce, involving all stakeholders from the Armed Forces and civil organisations, needs to be raised and trained. Currently, due to lack of collaboration, a holistic pattern of cyber-readiness has not evolved. Above all, Pakistan needs a collaborative mechanism. The National Security Division (NSD) should quickly take on this responsibility.
- The CERT (Computer Emergency Response Team) – Pakistan Telecom Sector Implementation Plan should be annexed with Prevention of Electronic Crimes Act, 2016 through legislation (if considered appropriate).
- A military cyber command should be established. A suitable existing model of an advanced country can be adopted.
- Universities should start programmes to prepare cyber security leaders and managers. Here again, curricula followed by some international universities can be adopted. A future generation of technically proficient cyber security specialists should be prepared.
- Security audits carried out by PTA CERT, weaknesses observed and guidance for corrective actions should be shared with all users of IT.
- Organisations should aim at resilient and ‘intrusion tolerant’ computer networks.

- Inter-agency and intra-agency intelligence sharing must be ensured. The key advantage of information is that it allows more holistic view of emerging threats and patterns and lessons learned from experience.
- There should be an international agreement on the fair and lawful use of cyberspace on the lines of Geneva agreements, and agreements on telecommunications that are facilitated by the ITU.

## 13. CONCLUSION

The need to acquire requisite capability to neutralise cyber-attacks is now the most urgent and vital requirement. But, growing dependence on the Internet has simplified the work of cyber-attackers. Effective steps against hovering threats are difficult because of the advantages of asymmetry and anonymity which hackers have. However, this does not mean acceptance of this dimension as *fate accompli*. Effective and realistic SOPs, to include organising trained CERTs, effective coordination among the public (including the defence establishment) and the private agencies (including Internet Service Providers) and preparing future cyber leaders and managers can make the difference because any future war will be fought in cyber space not the battlefield.

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# Consanguineous Marriages: Effects on Pregnancy Outcomes in Pakistan

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## ABSTRACT

*Being a traditional and close-knit society, Pakistan has a substantial portion of the population who have consanguineous marriages. The purpose of this study is to investigate the socioeconomic and demographic factors behind consanguineous marriages and their effects on pregnancy outcomes. Secondary data of 13,558 married women, as provided in the Pakistan Demographic and Health Survey (2012-13), was utilised to conduct this research. The results demonstrate that women who are poor, uneducated and belong to the least developed regions of the country, are significantly more likely to be in consanguineous marriages. There is a higher prevalence of miscarriages, abortions and stillbirths in such marriages as compared to non-consanguineous ones. Therefore, there is a need to create public awareness on the adverse health impacts of consanguineous marriages.*

**Key words:** Consanguineous, fertility, abortion, miscarriage, stillbirth, Multinomial Logistic Regression, Pakistan.

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# 1. INTRODUCTION

Consanguineous marriages constitute a marital union between a man and a woman who are blood relatives. Such marriages are prevalent in various countries and cultures across the globe. In particular, consanguineous unions are exceedingly common in Muslim countries in the Middle East, Asia and Africa (Riaz et al. 2016). Not only are cousin marriages widely perceived as fortifying familial ties and stability due to greater compatibility, they are also seen as a means to keep property within the parental families because of lower bridal dowry (Hamamy 2012; Hussain 1999).

Pakistan's rate of cousin marriages is estimated to be particularly high at approximately 65%, India 55%, Saudi Arabia 50%, Afghanistan 40%, Iran 30%, and Egypt and Turkey 20% (Hamamy 2012; Pellissier 2012; Ullah 2015). There are often adverse health impacts of such marriages between first and second cousins such as disproportionately higher pregnancy losses, with the offspring being at a greater risk of inheriting harmful conditions caused by homozygous recessive genes and genetic disorders (Bokhari et al. 2015; Kuntla et al. 2013; Naibkhil and Chitkara 2016; Shamshad et al. 2016). There is vast body of literature affirming the link between consanguineous marriages and non-live birth outcomes (Assaf & Khawaja 2009; Mokhtar & Abdel-Fattah 2001; Tadmouri et al. 2009). Research has also revealed that for every incidence of parental consanguinity, the risk of a child with congenital heart diseases increases (Ullah et al. 2018). Women, in the consanguineous marriage group, in their past obstetrical history also have higher rates of intrauterine deaths (Younis et al. 2018). Hence, rates of abortion, termination and stillbirths are found to be higher among females having consanguineous marriages (Omer et al. 2016). Trend analysis of past Pakistan Demographic and Health Surveys (PDHSs) have also found significant positive relation between consanguineous marriages and poor pregnancy outcomes. Marriages between blood relatives may also occur disproportionately within certain demographics and socioeconomic classes, and can have substantial negative health impacts (Omer et al. 2016; Sthanadar et al. 2016). The highest rates of cousin marriages in Turkey have been recurrently associated with low socioeconomic status, illiteracy and rural residence (Koc 2008). Nevertheless, most earlier studies on Pakistan have had a gap in knowledge on the socioeconomic variations in consanguineous marriages. There is also a need to quantify their effects on pregnancy outcomes across demographic and socioeconomic characteristics by applying various statistical models and tests for data analysis. This study aims to fill this gap by answering the following research questions:

1. What is the historical trend of consanguineous marriages in Pakistan?
2. What is the current prevalence of consanguineous marriages in Pakistan?
3. How are consanguineous marriages related to negative pregnancy outcomes, such as miscarriages, abortions and stillbirths?

## 2. METHODOLOGY

This is a cross-sectional quantitative study.

### 2.1. Data

This study explores the socioeconomic and demographic variations of consanguineous marriages and their effect on pregnancy outcomes by employing micro-level data from Pakistan's Demographic and Health Survey (PDHS) 2012-13. PDHS is based on a two-stage stratified provincial sample design (Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan, Gilgit-Baltistan and Islamabad Capital Territory [ICT]). PDHS is tasked with collecting information regarding a wide array of demographic and socioeconomic indicators. This research study selectively chose the relevant indicators pertaining to consanguineous marriages as well as maternal and infant health from a sample of 13,558 ever married women, aged 15-49 years. Table 1 is a summary of samples drawn after removing the records of 7 women (0.05%) due to insufficient information:

**Table 1: Respondents' Marital Status**

| Marital Status | Sample Size |
|---|---|
| Ever married women | 13558 |
| Non-consanguineous marriages | 4700 |
| Consanguineous marriages | 8851 |
| Married to paternal first cousins | 3816 |
| Married to maternal first cousins | 2761 |
| Married to relatives other than first paternal/maternal cousins | 2274 |

*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

According to the descriptive statistics shown in Table 2, the average age of the respondents in the sample was 33 years. These women were married approximately at 19 years of age, and the average duration of their marriage was 13 years.

**Table 2: Descriptive Statistics of Ever Married Women**

| Attributes | Minimum | Maximum | Mean | Sample |
|---|---|---|---|---|
| Age of women (years) | 15 | 49 | 33 | 13558 |
| Women's age at marriage (years) | 10 | 49 | 19 | 13558 |
| Marital duration (years) | 0 | 37 | 13 | 13558 |

*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

The current study also includes the number of times a woman became pregnant and the duration of the pregnancy was also recorded, along with their respective pregnancy

outcomes. These outcomes refer to and include live births, stillbirths/non-live births, miscarriages, and abortions. Thus, in order to obtain this information, the PDHS (2012-13) included questions regarding these multiple outcomes (NIPS and ICF International 2013). Pregnancies lost indicate the magnitude of pregnancies which have been wasted (Aziz & Manzoor 2016). Live births measure the number of infants who are able to breathe after being born, while, non-live births constitute those infants who were delivered and were born dead. Conversely, abortion is a state which is induced to prevent the birth of an infant. Table 3 provides descriptive statistics of the total number of pregnancy terminations, age of women at the time of termination of pregnancy, magnitude of pregnancies lost and duration of pregnancies lost:

**Table 3: Summary of Pregnancy History**

| | **Min** | **Max** | **Mean** | **Sample** |
|---|---|---|---|---|
| Total number of pregnancies | 1 | 18 | 4 | 14350 |
| Age of women at time of pregnancy dissolution (years) | 13 | 49 | 27 | 14350 |
| Number of pregnancy losses | 0 | 13 | 1 | 14350 |
| Duration of pregnancy lost (months) | 1 | 10 | 4 | 2372 |

*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

While women, who were part of the sample, had an average of four pregnancies, the minimum number of pregnancy losses were reported to be zero, while, on average, a woman had lost at least one pregnancy. The mean age of the women at the time of dissolution of a pregnancy was reported to be 27 years, with their pregnancies ending within a time-span of four months.

## 2.2. Data Limitations

The data showed limited access or permission to have medical consultation in consanguineous marriages as most of the respondents did not even fulfill the standard criteria of antenatal visits during pregnancy. Moreover, due to the illegality of abortion in Pakistan, there is ambiguity regarding the number of abortions which either may have been reported as miscarriages or not reported at all by the respondent. Another limitation of this study is the primary data and its accuracy pertaining to what the women have called a 'stillbirth', 'abortion' and 'miscarriage'. As mentioned earlier, the number of abortions could be far greater, but due to the social stigma and illegal practice, they could be greatly under-reported.

## 2.3. Definitions

Data on the type of marriages was extracted from the questionnaires of individual women 'Section 1: Respondent's Background' of the PDHS (2012-13). In this section, two

questions were asked about the type of marriage of a woman i.e., *Is/was there a blood relationship between you and your husband?* To further examine the nature of the previous relationship with the husband, the next question asked was, *What type of relationship (is/was) it?* The first question had a binary response, as '0' was used if there was no consanguineous relationship and '1' was used if there was one, prior to the marriage of the couple (Saleem et al. 2016). The second question is in multinomial categories defined as: '0' if unrelated; '1' if paternal first cousin; '2' if maternal first cousin; '3' if second cousin or other relative (Koc 2008). Details of the variables are provided in Annexure I.

## 2.4. Statistical Analysis

PDHS data allowed analysis of the type of marriages by the socioeconomic and demographic characteristics of the female respondents. Thus, these linkages were examined through the use of descriptive statistics, cross- tabulation and chi-square association to test the presence of any statistical association between the nature of marriage and reproductive outcomes.

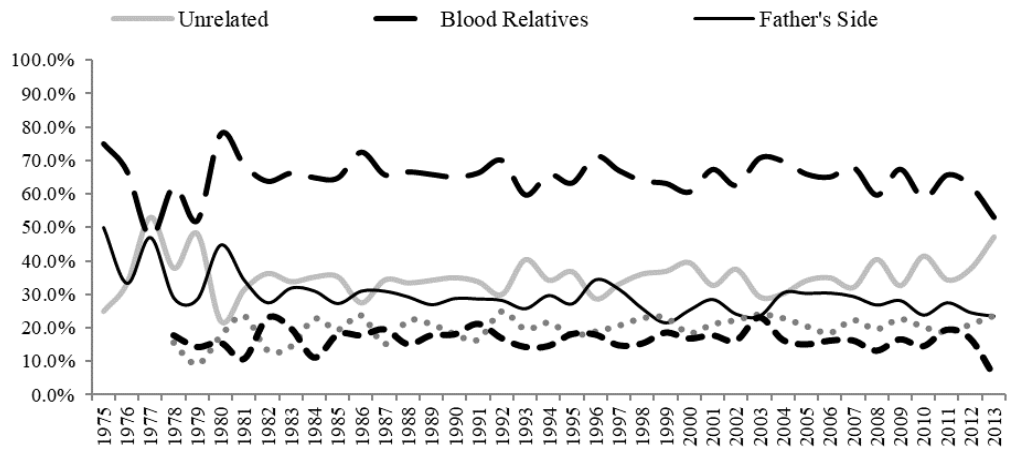
The year of marriage was estimated from the micro data of PDHS (2012-13), and not collected from multiple data sources. Women, who provided the information about when marriage occurred, are presented through a line graph as a summary of prevalence of consanguineous marriages in Pakistan.

The factors on which the prevalence of consanguineous marriages is contingent were calculated through bivariate percentage distributions. The net effect of predictors on the response variable was estimated through Binary Logistic Regression since it assumes that the outcome is in binary form, and estimates the ratio of the consanguineous marriages versus non-consanguineous marriages (Riaz et al. 2016). The net effect of independent factors was estimated through Multinomial Logistic Regression Model since it assumes that the outcome is in multinomial forms that are independent of each other (Hosmer et al. 2013).

# 3. RESULTS

The trend analysis of the data depicts that non-consanguineous marriages have become increasingly prevalent in Pakistan. Consanguinity was found to be widely practiced (80% in 1980) in Pakistan. However, there was a secular decline from 80% (1980) to 65% (2013). Similar decrease was found with paternal-sided cousins, while marriages with maternal cousins rose in 2011-13 (Figure 1):

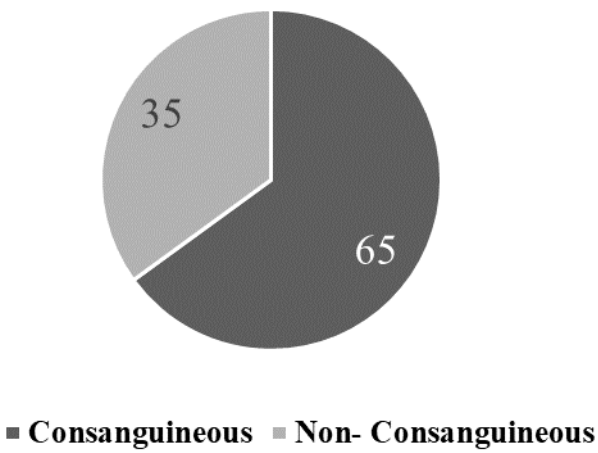
**Figure 1: Trends in Marriages by Types (1975-2013)**




*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

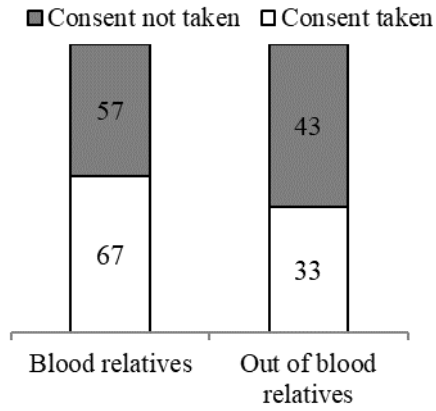
Evidence of the pervasiveness of conventional norms and traditions is indicated by the high rate (65%) of the total marriages being consanguineous in nature (Figure 2):

**Figure 2: Distribution of Ever Married Women (15-49 Years) by Type of Marriage (%)**




*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

**Figure 3: Female Consent about Marriages**

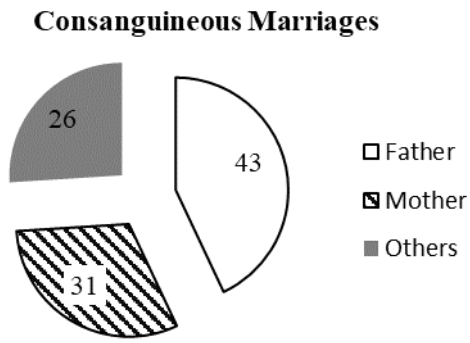



*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

While, 57% of those who were married to their blood relatives were not asked for their consent, 67% were asked for their consent (Figure 3). Often, the marriage proposals came from paternal relatives (43%), quite a few came from maternal relatives (31%), and the rest came from relatives (26%) (Figure 4):

**Figure 4: Percentage Distribution of Ever Married Women (15-49 Years) Married to**

**Blood Relatives by Type of Relation with Husband**




*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

## 3.1. Reasons behind Consanguineous Marriages

All the aforementioned factors (see column 1 Table 4) are found to be statistically associated with type of marriages on a significant basis (chi-square $p \leq 0.000$). For instance, consanguineous marriages (65%) tend to occur more among women who marry after turning 19. Of them, almost 40% were with paternal first cousins, and 35% with maternal cousins (Table 4). Although the proportion of consanguineous marriages is similarly high in the rural areas of almost all the provinces, Sindh and rural Punjab have

the highest prevalence of consanguineous marriages, with 82% and 72% of all marriages, constituting such unions, respectively. Conversely, Khyber Pakhtunkhwa has the least prevalence of cousin marriages which are 55% and 61% of the total in urban and rural areas, respectively.

**Table 4: Distribution of Ever Married Women (15-49 Years) Reporting Consanguineous Marriage by Type of Blood Relationship with their Husband before Marriage and Background Characteristics (%)**

| Indicators | Levels | Consanguinity | | | | |
|---|---|---|---|---|---|---|
| | | Overall | Type of Relatives | | | |
| | | | Father | Mother | Others | n† |
| **Woman's age at first marriage** | less than 19 | 59.8 (7288) | 45.6 | 28.6 | 25.8 | 5109 |
| | 19 and above | 65.3 (6259) | 39.7 | 34.7 | 25.6 | 3742 |
| **Current age of woman** | 15-24 | 71.1 (2707) | 45.0 | 30.2 | 24.7 | 1924 |
| | 25-34 | 63.7 (5249) | 40.8 | 33.1 | 26.0 | 3340 |
| | 35-45 | 64.2 (5594) | 44.2 | 29.9 | 25.9 | 3590 |
| **Regions** | Punjab (urban) | 53.8 (2526) | 33.9 | 36.9 | 29.1 | 1359 |
| | Punjab (rural) | 71.5 (5261) | 40.9 | 32.3 | 26.8 | 3761 |
| | Sindh (urban) | 52.4 (1521) | 42.3 | 27.2 | 30.5 | 797 |
| | Sindh (rural) | 82.4 (1612) | 58.2 | 24.4 | 17.4 | 1328 |
| | Khyber Pakhtunkhwa (urban) | 54.5 (321) | 42.3 | 28.0 | 29.7 | 175 |
| | Khyber Pakhtunkhwa (rural) | 60.7 (1586) | 45.6 | 31.0 | 23.4 | 962 |
| | Balochistan (urban) | 66.7 (114) | 44.7 | 31.6 | 23.7 | 76 |
| | Balochistan (rural) | 69.7 (452) | 40.3 | 33.3 | 26.3 | 315 |
| | Gilgit-Baltistan | 48.9 (94) | 43.5 | 39.1 | 17.4 | 46 |
| | Islamabad | 56.3 (64) | 38.9 | 30.6 | 30.6 | 36 |
| **Ethnicity of woman (maternal languages)** | Urdu | 47.8 (1301) | 34.7 | 29.7 | 35.5 | 622 |
| | Punjabi | 61.5 (5214) | 38.4 | 35.9 | 25.7 | 3205 |
| | Sindhi | 81.9 (1202) | 56.8 | 24.0 | 19.2 | 984 |
| | Pashto | 59.0 (1796) | 42.2 | 32.8 | 25.0 | 1059 |
| | Balochi | 91.9 (541) | 60.0 | 20.9 | 19.1 | 497 |
| | Siraiki | 83.2 (2074) | 41.9 | 30.0 | 28.1 | 1725 |
| | Miscellaneous | 53.5 (1416) | 44.9 | 29.6 | 25.5 | 757 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Education of woman** | No education | 70.9 (7734) | 46.0 | 29.4 | 24.6 | 5480 |
| | Primary | 66.4 (2153) | 40.3 | 32.0 | 27.8 | 1430 |
| | Middle to Secondary | 56.1 (2401) | 38.8 | 34.9 | 26.3 | 1347 |
| | Higher | 47.1 (1260) | 33.3 | 37.4 | 29.3 | 594 |
| **Current working status of woman** | Not working | 62.3 (9613) | 42.4 | 31.9 | 25.7 | 5987 |
| | Currently working | 72.8 (3935) | 44.5 | 29.9 | 25.7 | 2864 |
| **Marriage Consent** | No | 57.2 (2718) | 45.2 | 24.9 | 29.9 | 1556 |
| | Yes | 67.4 (10826) | 42.7 | 32.6 | 24.8 | 7294 |
| **Education of husband** | No education | 66.9 (4449) | 44.8 | 28.9 | 26.3 | 2977 |
| | Primary | 69.5 (2196) | 46.3 | 29.2 | 24.5 | 1527 |
| | Middle to Secondary | 64.8 (4569) | 40.9 | 33.9 | 25.2 | 2962 |
| | Higher | 59.3 (2287) | 41.0 | 32.6 | 26.5 | 1357 |
| **Economic status of woman** | Poor | 75.0 (5263) | 48.0 | 28.7 | 23.3 | 3946 |
| | Middle class | 65.8 (2698) | 40.7 | 32.5 | 26.8 | 1776 |
| | Richer | 56.0 (5587) | 38.3 | 33.7 | 28.1 | 3129 |
| **Total Sample** | Percentage | 65.3†† | 43.1 | 31.2 | 25.7 | 8851 |
| | No. of women | 13551 | 3816 | 2761 | 2274 | |

*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'. *Key:*
( ) in parenthesis is denominator.
(†) is sample from all ever married women (15-49 years) who are married within blood relations.
(††) is sample from total ever married women (15-49 years) successfully interviewed.
*Note:* Due to removal of users' missing values and lack of knowledge about categories from all indicators, the individual sum of samples between indicators may differ from total sample († and ††).

Among all ethnic groups, the dominance of consanguineous marriages is significant among the women (aged 15-49) who are either Baloch (92%), or Siraiki (83%), or Sindhi speaking (82%). As opposed to this, the ethnic group of Urdu speakers had the lowest prevalence of consanguineous marriages at 48% of the total. Table 4 also indicates that nearly 70% of uneducated women were married to blood relatives; whereas this proportion drops to 47% for highly educated mothers. Interestingly, 73% of working women were in consanguineous marriages. As expected, poor women tend to have the highest prevalence of consanguineous marriages (75%), of which a high proportion (48%) were married in the paternal side of the family.

## 3.2. Factors Affecting Consanguineous Marriages

In the absence of all predictors, it is observed that, women are 1.6 times more likely to be married to their blood relatives as opposed to those who marry outside their blood relatives (intercept 1.647; 1% level of significance) (see Table 5). Women in consanguineous marriages are 1.6 times (OR 1.604; $p \leq 0.001$; 95% CI: 1.5-1.8) more likely to have had their consent obtained at the time of marriage as compared to those who did not give their consent for it. Women who had given their consent to marry in blood relations were 1.95 times (OR 1.950; $p \leq 0.001$; 95% CI: 1.7-2.2) more likely to marry their maternal relatives as opposed to the women who were married to non-blood relatives (Table 5):

## Table 5: Odds of Consanguine Marriages by Background Characteristics

| Indicators | Levels | Model 1 | Model 2 (Non-Consanguineous) | | |
|---|---|---|---|---|---|
| | | Consanguinity | Type of Relatives | | |
| | | | Fatherδ | Motherδ | Othersδ |
| **Regions** | Punjab | Reference | Reference | Reference | Reference |
| | Sindh | 0.906 (0.785-1.046) | 1.189* (0.998-1.415) | 0.760** (0.628-0.92) | 0.745** (0.614-0.906) |
| | Khyber Pakhtunkhwa | 1.036 (0.87-1.233) | 1.361** (1.099-1.686) | 0.843 (0.667-1.065) | 0.890 (0.699-1.134) |
| | Balochistan | 1.01 (0.851-1.2) | 1.137 (0.924-1.399) | 1.012 (0.809-1.266) | 0.87 (0.688-1.099) |
| | Gilgit-Baltistan | 0.522*** (0.429-0.635) | 0.621*** (0.486-0.793) | 0.558*** (0.427-0.73) | 0.378*** (0.282-0.506) |
| | Islamabad | 1.053 (0.898-1.235) | 1.258** (1.027-1.542) | 0.913 (0.734-1.134) | 0.969 (0.772-1.216) |
| **Ethnicity of woman (maternal languages)** | Urdu | Reference | Reference | Reference | Reference |
| | Punjabi | 1.360*** (1.162-1.591) | 1.586*** (1.286-1.955) | 1.644*** (1.318-2.052) | 0.906 (0.728-1.128) |
| | Sindhi | 2.653*** (2.204-3.194) | 3.552*** (2.834-4.452) | 2.485*** (1.919-3.217) | 1.709*** (1.32-2.214) |
| | Pashto | 1.013 (0.841-1.221) | 1.030 (0.81-1.309) | 1.234 (0.948-1.605) | 0.821 (0.631-1.068) |
| | Balochi | 3.376*** (2.602-4.38) | 4.349*** (3.209-5.895) | 3.464*** (2.477-4.844) | 2.222*** (1.571-3.143) |
| | Siraiki | 3.230*** (2.669-3.907) | 3.942*** (3.121-4.979) | 3.302*** (2.561-4.256) | 2.421*** (1.884-3.111) |
| | Miscellaneous | 1.187*** (1.004-1.404) | 1.354** (1.089-1.683) | 1.193 (0.936-1.521) | 1.001 (0.792-1.267) |
| **Education of woman** | No Education | Reference | Reference | Reference | Reference |
| | Primary | 0.989 (0.88-1.113) | 0.907 (0.787-1.046) | 1.028 (0.881-1.2) | 1.078 (0.916-1.269) |
| | Middle to Secondary | 0.770*** (0.687-0.863) | 0.702*** (0.609-0.809) | 0.850** (0.729-0.991) | 0.787** (0.667-0.929) |
| | Higher | 0.594*** (0.513-0.689) | 0.495*** (0.409-0.599) | 0.702*** (0.573-0.859) | 0.636*** (0.513-0.788) |
| **Working status of woman** | Not working | Reference | Reference | Reference | Reference |
| | Currently working | 1.13 (1.03-1.24) | 1.074 (0.956-1.207) | 1.123** (0.989-1.274) | 1.243*** (1.089-1.42) |
| **Education of husbands** | No Education | Reference | Reference | Reference | Reference |
| | Primary | 1.156** (1.023-1.306) | 1.232** (1.065-1.425) | 1.157* (0.986-1.359) | 1.026 (0.862-1.221) |
| | Middle to Secondary | 1.289*** (1.166-1.427) | 1.367*** (1.21-1.544) | 1.305*** (1.142-1.491) | 1.155** (1.001-1.333) |

| | | | | | |
|---|---|---|---|---|---|
| | Higher | 1.282*** (1.133-1.452) | 1.349*** (1.159-1.57) | 1.209** (1.023-1.429) | 1.270** (1.065-1.514) |
| **Wealth status of woman** | Poor | Reference | Reference | Reference | Reference |
| | Middle class | 0.853** (0.765-0.951) | 0.833** (0.731-0.948) | 0.827** (0.717-0.953) | 0.934 (0.801-1.09) |
| | Richer | 0.756*** (0.678-0.842) | 0.717*** (0.629-0.817) | 0.723*** (0.626-0.835) | 0.877* (0.752-1.023) |
| **Age at marriage** | Continuous | 0.970*** (0.96-0.979) | 0.967*** (0.955-0.979) | 0.972*** (0.959-0.985) | 0.971*** (0.957-0.985) |
| **Marriage consent** | No | Reference | Reference | Reference | Reference |
| | Yes | 1.604*** (1.46-1.762) | 1.546*** (1.377-1.736) | 1.950*** (1.705-2.23) | 1.377*** (1.204-1.574) |
| **Intercept** | | 1.647*** | -0.518 ** | -0.884 *** | -0.449 ** |
| **Sample** | | 13486 | 3627 | 2594 | 2115 |

*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

*Note:*

Ranges in parenthesis ( ) are 95% confidence interval.

(δ) Reference Category is 'Marriages out of blood relations'.

Significance of co-efficients is tested at: 10% level of significance denoted by (*) single asterisk.

5% level of significance denoted by (**) double asterisks.

1% level of significance denoted by (***) triple asterisks.

The multivariate analysis predicts the negative odds for women who do not marry at younger ages. Chances of such events are 0.97 (OR 0.970; p≤0.001; 95% CI: 0.96-0.98) times less than older ages. Table 5 shows that as soon as women start marrying at older ages, the chances or their preference to marry in blood relatives decreases.

Regional variations indicate that the least likelihood of consanguineous marriages exist in Gilgit-Baltistan (OR 0.522; p≤0.001; 95% CI: 0.43-0.64) as compared to Punjab. The likelihood of marriage in paternal blood relatives were 1.2 times (OR 1.19; p≤0.001; 95% CI: 0.99-1.42) higher as compared to those who married in non-blood relatives in Sindh relative to Punjab. The odds of consanguineous marriages are high in Khyber Pakhtunkhwa (OR 1.04; p>0.100; 95% CI: 0.96-0.98) followed by Balochistan (OR 1.01; p>0.100; 95% CI: 0.85-1.20) as compared to Punjab. It is statistically significant that probability of such marriages are 1.4 times (OR 1.361; p≤0.05; 95% CI: 1.099-1.686) higher for women who marry paternal-sided relatives as compared to those who marry to non-blood relatives from Khyber Pakhtunkhwa relatives to Punjab (Table 5).

Consanguineous marriages were found to be dominant among all ethnic groups of ever married women (15-49 years). Balochi women, recognised as locals of Balochistan, emerged with 3.4 times (OR 3.376; p≤0.05; 95% CI: 2.6-4.4) more likely to engage in consanguineous marriages, and majority of them to paternal-sided relations (OR 4.35; p≤0.05; 95% CI: 3.2-5.9) as compared to non-consanguineous marriages in Balochi ethnic women relative to Urdu ethnic ones. After Balochi, Saraiki women were 3.2 times

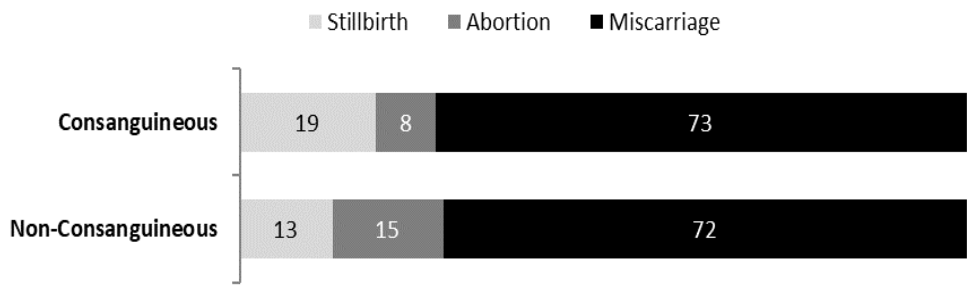
more likely (OR 1.361; p≤0.05; 95% CI: 1.099-1.686) to engage in consanguineous marriages, and like Balochi women more likely to marry in paternal blood relatives compared to non-blood family relatives to Urdu ethnic women (Table 5).

The data shows that there is almost 1.03 times more likelihood of primary educated women marrying paternal-sided relatives as compared to uneducated ones. Working women are 1.12 times more likely to marry their maternal-sided relatives as compared to marrying non-blood relatives (OR 1.123; p≤0.001; 95% CI: 0.99-1.27).

## 4. CONSEQUENCES

Almost 46% pregnancies were lost at least once in consanguineous marriages; and 40% of similar pregnancies were registered by mothers in non-consanguineous unions. Loss of at least one pregnancy emerged more often for mothers in consanguineous who married in their early ages [less than 20 years] (47%). Highest prevalence of at least one pregnancy loss was found for consanguineous mothers (54%) who lost it at a mature age (at least 30 years); and 50% from non-consanguineous in the similar age group (Annexure II). High extent of pregnancy losses were highlighted by mothers in consanguineous marriages from Balochistan (49%), rural areas (46%), and having Siraiki ethnicity (51%). Highly educated and socioeconomically non-poor mothers in consanguineous marriages showed least prevalence of at least one pregnancy wastage in their pregnancy history (Annexure II). Impact of type of marriages on adverse pregnancy outcomes is outlined in Figure 5:

**Figure 5: Distribution of Pregnancies Ending in Non-Live Births in Five Years Preceding the Survey (2009-13) by Type of Wastage and Marriages (%)**




*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

Results show the high prevalence of stillbirths (19%) among consanguineous unions; abortions were registered at 15% by mothers in non-consanguineous marriages; and nearly 73% miscarriages were reported by women married to blood relatives.

## 4.1. Miscarriages

Miscarriages were highest among consanguineous mothers (74%) who married in early ages (less than 20 years), and was almost 79% for non-consanguineous mothers aged 25 years and above. The prevalence of miscarriages was high (78%) among consanguineous mothers aged between 20-24 years than non-consanguineous ones (76%) (see Table 6).

Urban areas had a higher prevalence of miscarriages among consanguineous mothers (79%) as compared to non-consanguineous ones (70%). Highest prevalence of miscarriages was among consanguineous mothers belonging to Balochistan (82%) and Sindh (78%), whereas it was highest among non-consanguineous mothers from Khyber Pakhtunkhwa (82%). Almost 79% of Urdu-speaking consanguineous mothers had endured miscarriages, almost close to those for non-consanguineous mothers (81%). The data shows that highly educated consanguineous mothers had a high prevalence of miscarriages [76%] (Table 6). Low prevalence of miscarriages was found for the richest class (66% in the fifth quintile) because at low level of wealth (75% of the second quintile) higher prevalence of consanguineous marriages were recorded.

**Table 6: Distribution of Pregnancies Ending in Miscarriages in Five Years Preceding the Survey (2009-13) by Background Characteristics according to Type of Pregnancy Wastage and Marriages**

| Indicators | Levels | Type of Marriages | |
|---|---|---|---|
| | | Non-Consanguineous | Consanguineous |
| **Age at first marriage** | Less than 20 | 72.1 | 73.8 |
| | 20-24 | 67.7 | 73.5 |
| | 25 and above | 78.8 | 66.4 |
| **Age at pregnancy loss** | Less than 20 | 72.6 | 74.3 |
| | 20-24 | 75.6 | 77.8 |
| | 25 and above | 70.6 | 70.7 |
| **Province** | Punjab | 67.5 | 69.3 |
| | Sindh | 79.1 | 78.0 |
| | Khyber Pakhtunkhwa | 81.6 | 75.1 |
| | Balochistan | 71.4 | 81.9 |
| | Islamabad (ICT) | 75.0 | 71.4 |
| **Area of residence** | Urban | 69.6 | 79.3 |
| | Rural | 73.6 | 71.2 |
| **Ethnicity of woman (maternal languages)** | Urdu | 81.4 | 78.7 |
| | Punjabi | 62.9 | 68.8 |
| | Sindhi | 77.1 | 77.5 |

| | | | |
|---|---|---|---|
| | Pashto | 80.9 | 73.6 |
| | Balochi | 29.2 | 70.8 |
| | Siraiki | 66.2 | 72.6 |
| | Miscellaneous | 80.2 | 79.8 |
| **Education of woman** | No education | 72.2 | 71.9 |
| | Primary | 71.4 | 73.2 |
| | Middle to Secondary | 64.9 | 76.6 |
| | Higher | 84.8 | 76.8 |
| **Economic status of woman** | Poorest | 75.2 | 74.8 |
| | Poor | 72.7 | 75.3 |
| | Middle | 74.8 | 63.4 |
| | Rich | 75.0 | 73.1 |
| | Richest | 65.7 | 78.9 |
| **Total Sample** | Percentage | 72.0 | 73.2 |
| | N | 754 | 1616 |

*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

*Key:*

(ICT) Islamabad Capital Territory. Ages are measures in completed years and educational attainment is the completed grades of education. (NA) is not applicable/calculated.

Empty cells indicate insufficient sample size for the calculation of respective subgroup of population.

*Note:* Due to removal of user missing values and lack of knowledge categories from all indicators, the individual sum of samples for pregnancy losses may differ from cumulative total sample (N) of miscarriage. Data was not enough for calculating the rates for Gilgit-Baltistan Territory.

## 4.2. Abortions

Abortions were higher (15%) among women in non-consanguineous unions as compared to consanguineous unions (8%).

**Table 7: Distribution of Pregnancies Ending in Abortions in Five Years Preceding the Survey (2009-13) by Background Characteristics according to Type of Pregnancy Wastage and Marriages (%)**

| Indicators | Levels | Type of Marriages | |
|---|---|---|---|
| | | Non-Consanguineous | Consanguineous |
| **Age at first marriage** | Less than 20 | 13.8 | 9.0 |
| | 20-24 | 21.4 | 5.1 |
| | 25 and above | 7.6 | 12.1 |
| **Age at pregnancy loss** | Less than 20 | 5.5 | 8.0 |
| | 20-24 | 8.3 | 3.7 |
| | 25 and above | 18.6 | 10.4 |
| **Province** | Punjab | 20.2 | 11.8 |
| | Sindh | 10.4 | 2.1 |
| | Khyber Pakhtunkhwa | 5.3 | 8.3 |
| | Balochistan | | 1.0 |
| | Islamabad (ICT) | 25.0 | 14.3 |
| **Area of residence** | Urban | 19.6 | 9.5 |
| | Rural | 11.8 | 7.8 |
| **Ethnicity of woman (maternal languages)** | Urdu | 11.5 | 8.5 |
| | Punjabi | 22.5 | 13.0 |
| | Sindhi | 8.6 | .5 |
| | Pashto | 5.2 | 10.4 |
| | Balochi | | |
| | Siraiki | 21.5 | 8.1 |
| | Miscellaneous | 6.6 | 4.8 |
| **Education of woman** | No education | 11.7 | 6.9 |
| | Primary | 12.8 | 10.3 |
| | Middle to Secondary | 25.3 | 10.9 |
| | Higher | 10.5 | 8.4 |
| **Economic status of woman** | Poorest | 5.7 | .7 |
| | Poor | 6.4 | 5.9 |
| | Middle | 14.6 | 16.0 |

| | | | |
|---|---|---|---|
| | Rich | 14.0 | 11.2 |
| | Richest | 25.9 | 12.9 |
| **Total Sample** | Percentage | 15.3 | 8.1 |
| | N | 754 | 1616 |

*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

*Key:*
(ICT) Islamabad Capital Territory. Ages are measures in completed years and educational attainment is the completed grades of education. (NA) is not applicable/calculated.
Empty cells indicate insufficient sample size for the calculation of respective subgroup of population.
*Note:* Due to removal of user missing values and lack of knowledge categories from all indicators, the individual sum of samples for pregnancy losses may differ from cumulative total sample (N) of abortions. Data was not enough for calculating the rates for Gilgit-Baltistan Territory.

Abortions were the highest for consanguineous mothers (12%) who married after 24 years of age as compared to non-consanguineous mothers (8%). Almost 10% of abortions occurred for mothers in consanguineous unions who lost their pregnancies at ages greater than 25 years, lower than mothers in non-consanguineous unions [19%] (Table 7). Prevalence of abortion was highest in Islamabad (the capital of Pakistan). In Khyber Pakhtunkhwa, the prevalence of abortions was higher for consanguineous mothers (8%) than non-consanguineous mothers (5%). Consanguineous mothers in the Urdu and Pashto ethnic groups (9% and 10%, respectively) had higher rates of abortion as compared to non-consanguineous mothers. Middle class consanguineous and richest non-consanguineous mothers had particularly high abortion rates [16% and 26%, respectively] (see Table 7).

## 4.3. Stillbirths

Table 8 indicates that stillbirths occur more often in consanguineous unions. It is evident that the prevalence of such births was high among consanguineous mothers who married after 24 years of ages (22%); and conversely, it was highest for non-consanguineous mothers (14%) who married in early ages (less than 20 years). Most of the women in consanguineous marriages (19%) lost their pregnancies due to stillbirth when they were above 24 years of age, whereas for non-consanguineous mothers this happened at an earlier age (less than 20 years of age). Furthermore, rural women in consanguineous marriages were at higher risk (21%) than non-consanguineous (15%) of suffering a stillbirth (Sines et al. 2007; Subramanian et al. 2008).

**Table 8: Distribution of Pregnancies Ending in Stillbirth in Five Years Preceding the Survey (2009-13) by Background Characteristics according to Type of Pregnancy Wastage and Marriages (%)**

| Indicators | Levels | Type of Marriages | |
|---|---|---|---|
| | | Non-Consanguineous | Consanguineous |
| Age at first marriage | Less than 20 | 14.1 | 17.2 |
| | 20-24 | 10.9 | 21.3 |
| | 25 and above | 13.6 | 21.6 |
| Age at pregnancy loss | Less than 20 | 21.9 | 17.7 |
| | 20-24 | 16.0 | 18.5 |
| | 25 and above | 10.8 | 18.9 |
| Province | Punjab | 12.3 | 18.9 |
| | Sindh | 10.4 | 19.9 |
| | Khyber Pakhtunkhwa | 13.2 | 16.6 |
| | Balochistan | 28.6 | 17.1 |
| | Islamabad (ICT) | | 14.3 |
| Area of residence | Urban | 10.8 | 11.1 |
| | Rural | 14.6 | 21.0 |
| Ethnicity of woman (maternal languages) | Urdu | 7.1 | 12.8 |
| | Punjabi | 14.6 | 18.1 |
| | Sindhi | 14.3 | 22.0 |
| | Pashto | 13.9 | 16.0 |
| | Balochi | | 29.2 |
| | Siraiki | 12.3 | 19.3 |
| | Miscellaneous | 13.2 | 15.5 |
| Education of woman | No education | 16.0 | 21.3 |
| | Primary | 15.8 | 16.5 |
| | Middle to Secondary | 9.8 | 12.5 |
| | Higher | 4.8 | 14.7 |
| Economic status of woman | Poorest | 19.0 | 24.5 |
| | Poor | 20.9 | 18.8 |
| | Middle | 10.6 | 20.6 |

| | | | |
|---|---|---|---|
| | Rich | 11.0 | 15.7 |
| | Richest | 8.3 | 8.2 |
| Total Sample | Percentage | 12.7 | 18.7 |
| | N | 754 | 1616 |

*Source:* NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

Key:
(ICT) Islamabad Capital Territory. Ages are measures in completed years and educational attainment is the completed grades of education. (NA) is not applicable/calculated.
Empty cells indicate insufficient sample size for the calculation of respective subgroup of population.
Note: Due to removal of user missing values and lack of knowledge categories from all indicators, the individual sum of samples for pregnancy losses may differ from cumulative total sample (N) of stillbirths, abortions and miscarriages. Data was not enough for calculating the rates for Gilgit-Baltistan Territory.

Balochi (29%) and Sindhi (22%) women in consanguineous marriages experienced the highest number of stillbirths when compared to the women in non-consanguineous unions of the same ethnicity. Similarly, consanguineous mothers, who were better educated (14.7%) and richer (8.2%) had lower chances of suffering a stillbirth (Table 8).

## 5. ANALYSIS

Non-consanguineous marriages have become increasingly prevalent in Pakistan. All the aforementioned indicators (see column 1 Table 5) were found to be statistically associated with type of marriages on a significant basis (chi-square $p \leq 0.000$). This finding is consistent with Alper et al. (2004). Regional variation in prevalence of consanguineous marriages significantly provides that it is rural Punjab and Sindh where rates of consanguineous marriages are high in Pakistan. Besides these regional variations, ethnicity indicates Balochi- speaking women mostly have consanguine unions. These results correlate with those observed by Riaz et al. (2016).

In concurrence with findings of other studies (Afzal et al. 1994; Ahmad et al. 2016; Riaz et al. 2016), it is observed that uneducated women are more likely to be in consanguineous marriages as compared to educated ones. Interestingly, the chances of educated women having consanguineous marriage are less than educated men as compared to uneducated ones. This is indicative of the traditional nature of Pakistan's society where educated males prefer such marriages more as compared to educated females. Moreover, working women are more likely to be in consanguineous marriages as compared to non-working women. In addition, women from rich households are less likely to opt for consanguineous than non-consanguineous marriages. Shami et al. (1994) found similar results.

Although, some regions of Pakistan are conservative which hinders female empowerment and often supresses them under cultural norms, the data and analysis of

this study shows some different trends in consanguineous marriages. The analysis of PDHS data (2012-13) shows that consanguineous marriages are usually marriages of consent rather than being non-consensual.

Most of the literature found the stillbirths, miscarriages and infant mortality rate are slightly higher, while abortion rate is not different in consanguineous marriages (Bennett et al. 2002; Hamamy 2012; Tadmouri et al. 2009). In Pakistan's context, due to the illegality of abortion in the entire country, there is ambiguity regarding the number of abortions which either may have been reported as miscarriages or not reported at all. Unlike miscarriages, abortions occurred more often in urban areas than rural areas, but mothers in non-consanguineous marriages had a greater incidence of abortion. Punjabi women had a greater prevalence of abortion as opposed to others. When socioeconomic status is taken into account, events of abortion were more frequent in case of women with primary and secondary level education. Stillbirths occurred more often in consanguineous unions than non-consanguineous ones. This finding is similar to the results obtained by Saleem et al. (2016) and Stoltenberg et al. (1999). A vast body of literature regarding the pervasiveness of marriage with blood relatives shows that amongst women of similar socioeconomic standing, the prevalence of stillbirth is higher than those who aren't. These observations are consistent with other studies (Assaf & Khawaja 2009; Hamamy 2012; Omer 2016; Pellissier 2012).

## 6. CONCLUSION

This study involved a concerted effort to examine and evaluate the impact of consanguineous marriages using national data and employing robust statistical methods to assess their prevalence and effect on pregnancy outcomes in Pakistan. The analysis indicates preference for cousin marriages as the overall prevalence of consanguinity was found to be 65% in Pakistan. This study found that, although, 43% cousin marriages occurred among paternal relatives, 31% occurred between maternal relatives, and almost 26% were with distant relatives. Moreover, the proportion of women married to their blood relatives was found to be higher in rural areas than in urban areas of Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa.

The occurrence of consanguineous marriages varied across different socioeconomic groups. Education was observed to play an important role in the pervasiveness of consanguineous marriages. The proportion of women in consanguineous marriage decreased with a corresponding increase in their education level. A large proportion of lesser educated women, i.e., not educated or those only with primary education (70% and 66%, respectively) were married to their blood relatives as opposed to those women with higher education (47%). Similarly, women from poor economic status showed a higher predilection for consanguineous unions in comparison to women belonging to the middle

and elite classes (75%, 65% and 56%, respectively). Further disaggregation of the data showed that of the 75% of poor women married to their blood relatives, 48% were married to their paternal relatives.

The results demonstrate that there is a significant association between consanguineous marriages and adverse pregnancy outcomes in Pakistan. All types of adverse pregnancy outcomes, which are assessed in this study, show a greater prevalence among consanguineous mothers compared to non-consanguineous mothers. Even among women of similar socioeconomic standing, the rate of miscarriages and stillbirths was higher for women in consanguineous marriages. Miscarriages most frequently occurred (82%) at the end of pregnancy among women in consanguineous marriages with distant relatives; with nearly 23% abortions in women married to their paternal relatives. The data shows that stillbirths occurred in at least 15% of the women who married non-relatives.

The findings of the research also show that consanguineous marriages are significantly associated with a woman's age, her level of education and her economic status. Moreover, as there is a significant association between consanguineous marriages and adverse pregnancy outcomes in Pakistan, there is pertinent need to educate people about the health risks associated with them. Increasing public awareness about consanguinity can be achieved by providing proper education and training to primary healthcare workers on the health and social issues related to consanguinity.

In order to understand the linkage of consanguineous marriages and their impact on fertility outcomes, there is need to further explore what factors determine these outcomes in general to enhance the implications of consanguineous marriages and their correlates.

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# Annexure I

## Variable Definitions

| No. | Variables | Construction |
|---|---|---|
| **Background Indicators** | | |
| 1 | Regions | 1) Punjab; 2) Sindh; 3) Khyber Pakhtunkhwa; 4) Balochistan; 5) Gilgit-Baltistan; 6) Islamabad (ICT) |
| | | 1) Punjab urban; 2) Punjab rural; 3) Sindh urban; 4) Sindh rural; 5) Khyber Pakhtunkhwa urban; 6) Khyber Pakhtunkhwa rural; 7) Balochistan urban; 8) Balochistan rural; 9) Gilgit-Baltistan; 10) Islamabad (ICT) |
| 2 | Residence | 1) Urban; 2) Rural |
| 3 | Ethnicity | 1) Urdu; 2) Punjabi; 3) Sindhi; 4) Pashto; 5) Balochi; 6) Siraiki and 7) Others |
| **Socioeconomic Indicators** | | |
| 4 | Education of woman | 0) Uneducated (less than 1 grade); 1) Primary (1-5 grades completed); 2) Middle to Secondary (6 to 10 grades completed); and 3) Higher (completed education above 10 grades). |
| 5 | Education of husband | 0) Uneducated (less than 1 grade); 1) Primary (1-5 grades completed); 2) Middle to Secondary (6 to 10 grades completed); and 3) Higher (completed education above 10 grades). |
| 6 | Current working status of woman | 0) Woman not engaged in any job/profession during last 12 months; 1) woman engaged in some job/profession during last 12 months. |
| 7 | Socioeconomic status | 1) Poorest (first quintile); 2) Poor (second quintile); 3) Middle (third quintile); 4) Rich (fourth quintile) and 5) Richest (fifth quintile) |
| 8 | Consent while getting married | 1) Yes<br>2) No |
| **Demographic Indicators** | | |
| 9 | Current age of woman (years) | 1) 15-24; 2) 25-34; 3) 35-45. |
| 10 | Age of mother at first marriage (Years) | 1) Less than 19; 2) 19 and above.<br>1) Less than 20; 2) 20-24; 3) 25 and above.<br>1) Less than 20; 2) 20-24; 3) 25-29; 4) 30 and above. |
| 11 | Age at pregnancy loss (years) | 1) Less than 20; 2) 20-24; 3) 25-29; 4) 30 and above.<br>1) Less than 20; 2) 20-24; 3) 25 and above. |

*Source:* Calculations from NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

## Annexure II

**Distribution of Pregnancies Ending in Five Years Preceding the Survey by Background Characteristics according to Extent of Pregnancy Wastage and Type of Marriages (%)**

| Indicators | Levels | At least 1 Pregnancy Lost | |
|---|---|---|---|
| | | Non-Consanguineous | Consanguineous |
| **Age at first marriage** | Less than 20 | 41.4 (39.5 - 43.3) | 47.2 (45.4 - 49.0) |
| | 20-24 | 37.2 (34.8 - 39.6) | 43.1 (40.2 - 46.1) |
| | 25-29 | 44.1 (39.9 - 48.3) | 39.0 (32.6 - 45.3) |
| | 30 and above | 47.5 (36.6 - 58.4) | 43.3 (25.3 - 61.3) |
| **Age at pregnancy loss** | Less than 20 | 29.5 (25.0 - 34.1) | 32.6 (27.3 - 37.8) |
| | 20-24 | 34.6 (32.0 - 37.2) | 40.0 (37.3 - 42.8) |
| | 25-29 | 38.5 (36.1 - 40.9) | 47.8 (45.1 - 50.5) |
| | 30 and above | 49.8 (47.4 - 52.3) | 53.8 (51.2 - 56.3) |
| **Province** | Punjab | 41.7 (39.9 - 43.5) | 45.4 (43.4 - 47.4) |
| | Sindh | 36.5 (33.4 - 39.6) | 48.4 (45.5 - 51.3) |
| | Khyber Pakhtunkhwa | 41.3 (37.8 - 44.8) | 39.5 (35.0 - 43.9) |
| | Balochistan | 38.8 (32.2 - 45.4) | 49.3 (43.2 - 55.5) |
| | Gilgit-Baltistan | 25.0 (12.2 - 37.8) | 37.7 (16.5 - 59.0) |
| | Islamabad (ICT) | 43.5 (23.2 - 63.7) | 48.6 (24.8 - 72.3) |
| **Regions** | Urban | 40.2 (38.0 - 42.4) | 45.4 (42.4 - 48.5) |
| | Rural | 40.5 (38.8 - 42.3) | 45.7 (44.0 - 47.4) |
| **Ethnicity of woman (maternal languages)** | Urdu | 42.3 (38.3 - 46.3) | 42.4 (36.3 - 48.6) |
| | Punjabi | 39.6 (37.5 - 41.7) | 43.2 (40.6 - 45.8) |
| | Sindhi | 37.8 (31.6 - 44.1) | 49.0 (44.9 - 53.0) |
| | Pashto | 42.0 (38.5 - 45.5) | 38.0 (33.4 - 42.7) |
| | Balochi | 30.2 (17.8 - 42.5) | 46.4 (40.8 - 52.0) |
| | Siraiki | 43.3 (38.6 - 48.0) | 51.2 (48.1 - 54.2) |
| | Miscellaneous | 39.2 (35.5 - 42.8) | 47.5 (42.7 - 52.3) |
| **Education of woman** | No education | 40.8 (38.8 - 42.8) | 47.9 (46.1 - 49.8) |
| | Primary | 43.8 (40.4 - 47.3) | 41.7 (38.1 - 45.4) |
| | Middle to Secondary | 40.6 (37.7 - 43.4) | 43.9 (40.0 - 47.8) |
| | Higher | 34.1 (30.4 - 37.9) | 37.2 (30.6 - 43.8) |

| | | | |
|---|---|---|---|
| **Economic status of woman** | Poorest | 41.5 (37.9 - 45.0) | 47.2 (44.5 - 50.0) |
| | Poor | 38.9 (35.6 - 42.3) | 48.3 (45.3 - 51.3) |
| | Middle | 34.1 (31.0 - 37.1) | 41.6 (38.0 - 45.1) |
| | Rich | 43.1 (40.3 - 45.8) | 43.5 (39.8 - 47.3) |
| | Richest | 43.3 (40.3 - 46.2) | 45.8 (41.8 - 49.9) |
| **Total Sample** | Percentage | 40.4 (39.0 - 41.8) | 45.8 (44.1 - 47.1) |
| | N | 4823 | 9523 |

Source: Calculations from NIPS and ICF International 2013, 'Pakistan Demographic and Health Survey (2012-13)'.

*Key:*
(ICT) Islamabad Capital Territory. Ages are measures in completed years and educational attainment is the completed grades of education. (NA) is not applicable/calculated.
Empty cells indicate insufficient sample size for the calculation of respective subgroup of population.
*Note:* Due to removal of user missing values and lack of knowledge categories from all indicators, the individual sum of samples for pregnancy losses may differ from cumulative total sample (N) of stillbirths, abortions and miscarriages. Data was not enough for calculating the rates for Gilgit-Baltistan Territory.

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# An Assessment of Community Intervention for Reduction of Waterborne Illnesses in Peshawar, Khyber Pakhtunkhwa, Pakistan

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## ABSTRACT

*Given the recent rise in the scarcity of clean drinking water in Pakistan and waterborne illnesses, a collaborative project between the Institute of Management Sciences (IMS) and Higher Education Commission (HEC) of Pakistan, took place in the city of Peshawar, Khyber Pakhtunkhwa. The aim of the study was to reduce waterborne illnesses by building knowledge and capacity of the communities to enable them to have clean drinking water without incurring high financial costs. A number of awareness seminars, along with health educational material, were delivered to the community through educational institutes. To analyse the effectiveness of the intervention, a pre-project and post-intervention phase through knowledge, attitude and practice (KAP) analysis was conducted to quantify the perceptions and knowledge of the community. The analysis showed that knowledge about waterborne illnesses increased from 52% to 87%, attitude change moved from 16% to 93%, whereas improvement in practices by adopting low cost measures for clean water increased from 15% to 68%. It can be concluded that awareness has positive impact on peoples' behaviour, knowledge and practice, especially when educational institutes are actively involved in community uplift projects. Effectiveness of such initiatives can be assured by widening their scope with involvement of government and non-government agencies as they play a pivotal role in social uplift of communities.*

**Key words:** Waterborne illnesses, clean drinking water, healthcare costs, Peshawar.

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# 1. INTRODUCTION

Health is an important component of human capital as it enhances workers' productivity by increasing their physical capacities such as strength and endurance; as well as their mental capacities including cognitive functioning and reasoning ability (Bloom and Canning 2005). While socioeconomic status is clearly linked to morbidity and mortality, mechanisms responsible for the association between environment and health have also been explored (Eileen 2012). It is now a proven fact that focusing on the elimination of environmental threats such as access to safe water and sanitation can lead to better health status as well as economic growth (Bloom and Canning 2005).

There has been a decrease in the level of the watertable all around the world because of alarming increase in population and climate change (Pereira et al. 2002). Around the globe, more than a billion people do not have access to clean drinking water due to gradual increase in world population as well as other issues such as drought, overuse and rapid urbanisation. In some parts of the less developed countries (LDCs), the situation is even more conspicuous where water is more costly than milk (Azizullah 2010). Countries like Pakistan are facing great challenges in attaining social and economic growth, and in improving the quality of life of its citizens. The indicators related to the overall environment and its impact on social development indicators and health are still very poor. One of the major factors affecting these indicators is the lack of availability of clean drinking water (Ibid.).

Today, Pakistan is facing numerous health issues. According to a World Bank report, Pakistan is one of the 17 countries facing water shortage. It is pertinent to mention that along with the shortage of water, the quality of water is also deteriorating (CDWA 2016). However, water supply in rural areas is the worst in the province of Balochistan, followed by Khyber Pakhtunkhwa. The situation is much better in Punjab and Sindh (Rasheed 2015).

Lack of clean drinking water has made the lives of children much more vulnerable. Mortality rate of children under five years of age is 101 per 1000 children. Diarrhoeal infections kill 1.5 million children every year (O Reilly et al. 2012). According to estimates of a UNICEF study, 62% of Pakistan's urban, and 84% of Pakistan's rural population neither has access to clean drinking water nor do they treat it properly (Malik 2013). Given this scenario and estimates, more than 20% hospital beds within Pakistan are occupied by such patients (UNICEF 2010). Therefore, focusing on the use of clean drinking water by the communities can avert this situation. In fact, more than 3.5 million children who are at high risk from deadly waterborne diseases in Pakistan can be saved (Rasheed 2015).

In Pakistan, people mostly use groundwater for drinking and other activities. Unfortunately, rapid industrialsation, exploitation of natural resources and unplanned urbanisation have contaminated water to a great extent. Contaminated water is left untreated because of increased cost of water treatment, the cost of which is borne (directly and indirectly) by already impoverished people. Tackling health issues like diarrhoea, cholera, tuberculosis and other waterborne diseases has never been more imperative than before (Ibid.).

This research aimed at analysing the situation locally by targeting residential areas in Peshawar city of Khyber Pakhtunkhwa province. Water samples from communities were tested, and an efficient and effective awareness campaign was conducted to improve the knowledge, attitude and practices of the community for clean drinking water practices. This played a vital role in building capacity of the communities in a cost-effective manner to treat their water properly before use leading to improved health status and reduced health costs.

## 1.1. Rationale

Unsafe drinking water can lead to several diseases such as polio, hepatitis A, diarrhoea, typhoid, and intestinal worms. Around 250,000 people die within the country as a direct result of these waterborne diseases (Malik 2013). It is estimated that 1.6 million Disability Adjusted Life Years (DALYs) are lost annually as a result of death and ailment due to diarrhea; whereas almost 90,000 as a result of typhoid (Azizullah 2010). The most cost-effective way of changing this situation is to train targeted human resources who build the capacity of the community later on. For this purpose, considering limited time, resource availability and maximum benefit, the females were targeted. This was also meant to ensure sustainability of the intervention. Since these trained female graduates are the caretakers of their homes, training them and making them aware would result in a knowledgeable future generation.

## 1.2. Aim

The aim of the study was to reduce waterborne diseases by building knowledge and capacity of the females (and communities) of Peshawar to enable them to have clean drinking water without incurring high financial costs.

## 1.3. Objectives

1. Assessment of the water used for drinking by the communities through water testing.
2. Targeting and identifying the female graduates belonging to various areas in Peshawar and assessment of their perceptions regarding the use of clean drinking water through pre-project KAP analysis.
3. Providing them with knowledge and training regarding safe drinking water practices.

4. Enabling them to deliver this knowledge and training to the localities they belong to for the trickledown effect.
5. Assessment of outcomes through post-project KAP analysis.

## 2. METHODS

The following methodological framework was adopted in order to conduct this study which took place from September 2016 to July 2017.

### 2.1. Target Area

Water samples were taken from seven main residential areas of Peshawar. A total of 14 samples were taken from both the source of water and final consumption point at the household level. These samples were tested by the Pakistan Council of Research in Water Sources for 21 parameters broadly categorized as Physical and Aesthetic Parameters, Major Chemical Parameters, and Microbiological Parameters. Various schools and colleges of the same residential areas were targeted to deliver the awareness sessions for knowledge building.

### 2.2. Knowledge Testing

Before arranging awareness seminars, a pre-project phase was conducted to quantify the perceptions and knowledge of the community regarding this issue. For this purpose, data was collected through KAP questionnaires from all the female graduates of the institutes who were to be provided with knowledge at a later stage. After the awareness sessions, the same participants were approached for collecting data for post-project outcome analysis. This information was used to analyse the impact of the awareness campaign.

### 2.3. Capacity building of the Participants

Capacity of the female students of the targeted locality was done through seminars conducted at schools and colleges. Both public and private institutes were engaged or partnered to deliver knowledge and training to the target participants for clean drinking water practices. Hand-outs and brochures containing essential information were also distributed among the participants as self-learning material. Around 1000 graduates were reached out through these seminars.

### 2.4. Trickling down to the Communities

Basic health literature, including pamphlets and posters, which were provided to the participants were further delivered to the community they belonged to enabling trickling down of information at the ground level.

## 2.5. Analysing the Outcome

A second phase of KAP analysis was conducted with the same group of participants after the awareness seminars to analyse the improvement in the knowledge, attitude and practices of the community.

## 2.6. Beneficiaries

The beneficiaries of the project included:

1. Students of various institutes who were provided with knowledge and training.
2. Target communities benefitted from clean drinking water practices. They were able to save money that they, otherwise, would have spent on buying clean water, or on treating illnesses caused by using unclean or contaminated water.
3. Educational institutes which were provided with water filters.
4. Healthcare providers in the public sector who will be able to save money they have to otherwise spend on the treatment of patients who come with illnesses caused by drinking unclean water.

# 3. RESULTS

## 3.1. Target Area Water Testing

To assess the quality of drinking water, a total of 14 samples of water were collected from the source of water and final consumption point (household). These water samples were tested by following a very strict protocol for obtaining valid results. The water testing results revealed that all the water samples were clean at source, but contaminated at the household level, clearly making it unfit for drinking purposes. It was evident from the results that contamination was taking place through water supply pipelines in the area. Interestingly, even in well-off and planned residential areas in the city, it is alarming that the water supply is not safe with respect to minimal standards.[1] The situation is certainly far worse in other regions of Peshawar city. These results further supported the need of said interventions for community uplift to reduce healthcare costs.

## 3.2. Results of Pre- and Post-project KAP Analysis

The questionnaire was designed specially to assess the knowledge, attitude and practices of the participants towards safe drinking water. The average age group of the respondents was 16 years and the sample size was 1000 female students. Out of all the participants, 500 were selected randomly for pre- and post-project KAP analysis and Focus Group Discussions (FDGs).

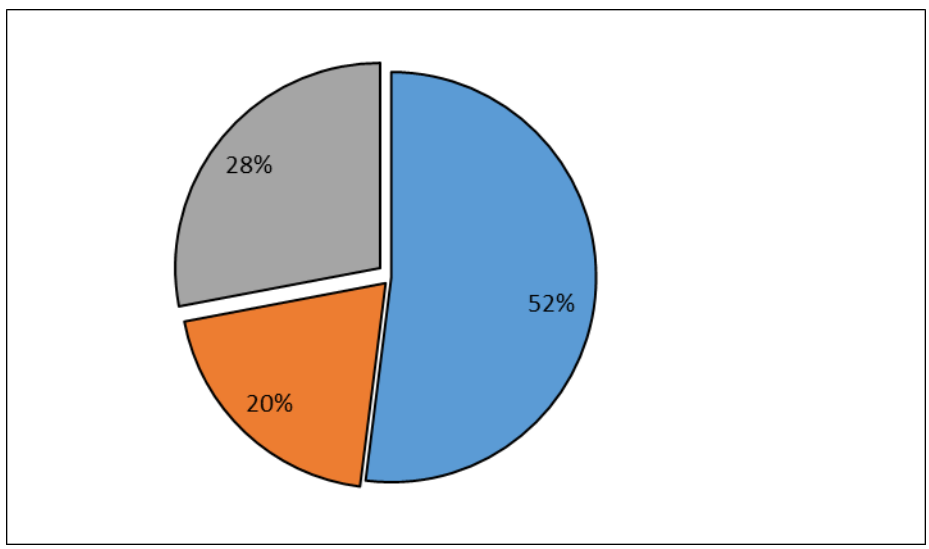
[1] A parametric value in this context is most commonly the concentration of a substance, e.g. 30 mg/l of Iron, a count such as 500 *E. coli* per litre or a statistical value such as the average concentration of copper is 2 mg/l (EPA National Primary Drinking Water Standards).

Given a few basic questions about the topic, 52% of the respondents claimed that waterborne illnesses are one of the main problems in their area; while 44% of the students showed complete dissatisfaction with the water quality they use domestically for drinking. The Municipal Corporation (MC) was revealed to be the only source of water supply for 76% of the respondents residing in these areas. Later, the same instrument was used to analyse the community. The details are as follows:

### *3.2.1. Knowledge Testing*

The questions in the knowledge section of the research instrument comprised of knowledge regarding water borne illness and related health costs. The results of the pre-test revealed that a majority (52%) of the participants were not aware of the illnesses caused by unclean water. On the other hand, 28% of the participants were unaware about the risks and costs related to unsafe water. The result further showed that only 36% of the students were aware that unclean water can cause viral, bacterial and fungal diseases. Regarding the question about the most affected age group from drinking unclean water, 47% of the students selected age group 1 to 5 years, while the rest had no knowledge regarding this very basic question.

**Figure 1: Knowledge Level of Participants before Intervention**



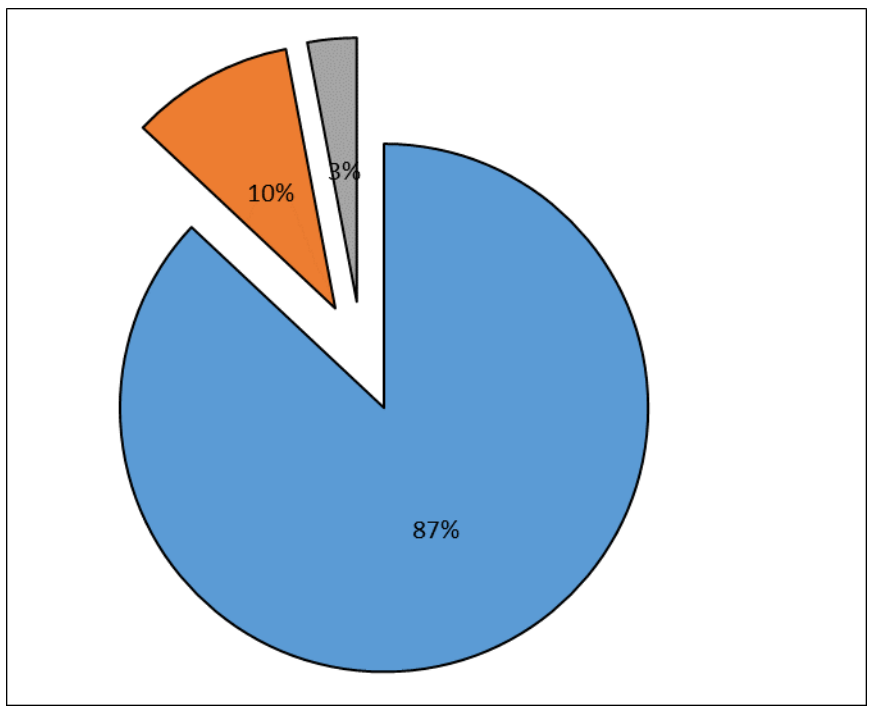

*Source:* Study findings.

While answering a question about causes of waterborne illnesses, 52% of the students pointed out poor sanitation as the main problem, while 3% and 7% of the students pointed out surface water, and rain and floods respectively as the main reasons for contaminated water.

After the awareness seminars, training and capacity building, the students were asked to give their responses to a number of questions related to knowledge, attitude and practices related to drinking water practices. A significant improvement was revealed in the post-KAP test: 87% of the respondents showed a significant increase in their knowledge related to waterborne illnesses, where 10% were found to be neutral. In the words of one of the participants:

> I had no idea about the very basic knowledge that I should have being an educated person. These seminars provided me with a great deal of information about why it is so important to clean water before drinking (Student ICMS, Peshawar).

**Figure2: Knowledge Level of Participants after Intervention**



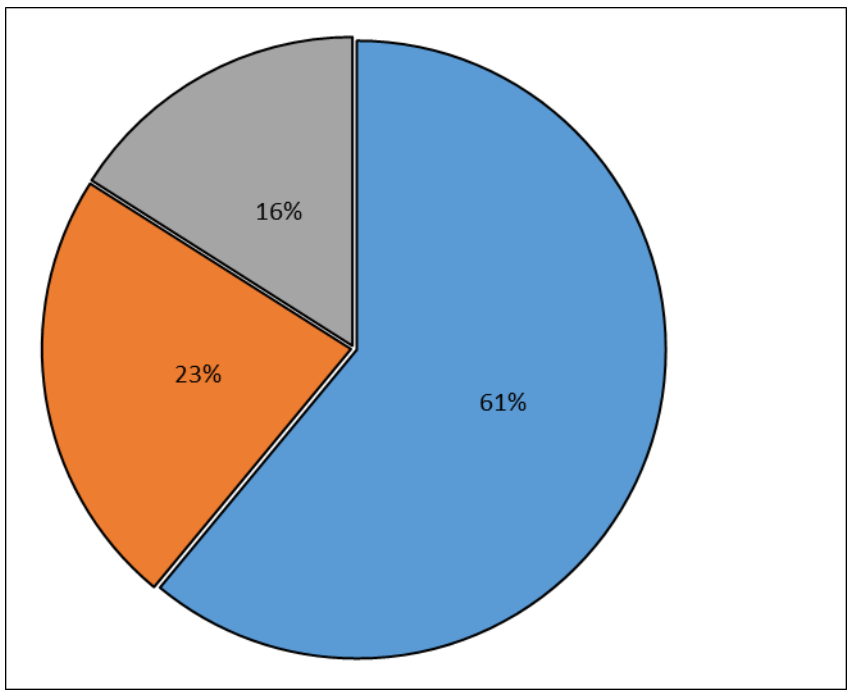

### *3.2.2. Assessing Attitude*

Evidence from questions related to attitude showed a similar pattern where around 61% of the respondents showed poor attitude towards safe drinking water practices. Major reason behind the poor attitude was found to be lack of knowledge and a carefree attitude towards the issue. Interestingly, those students whose knowledge was found to be comparatively better also scored less in the domain of attitude indicating that majority of the respondents care less about the quality of their health. However, 49% of the students showed confidence that waterborne illnesses can be easily cured, whereas 27% were

uncertain and 10% strongly opposed the idea of easy solutions to the issue of waterborne illnesses.

Some 51% of the respondents supported the idea of having awareness and training sessions for the reduction of waterborne illnesses, while 39% of the students remained uncertain. Only 6.7% of the students claimed that such sessions cannot play an important role in the reduction of waterborne illnesses. 61% of the students highlighted the significance of the role government and NGOs can play for the supply of clean drinking water.

**Figure 3: Attitude Assessment before Intervention**



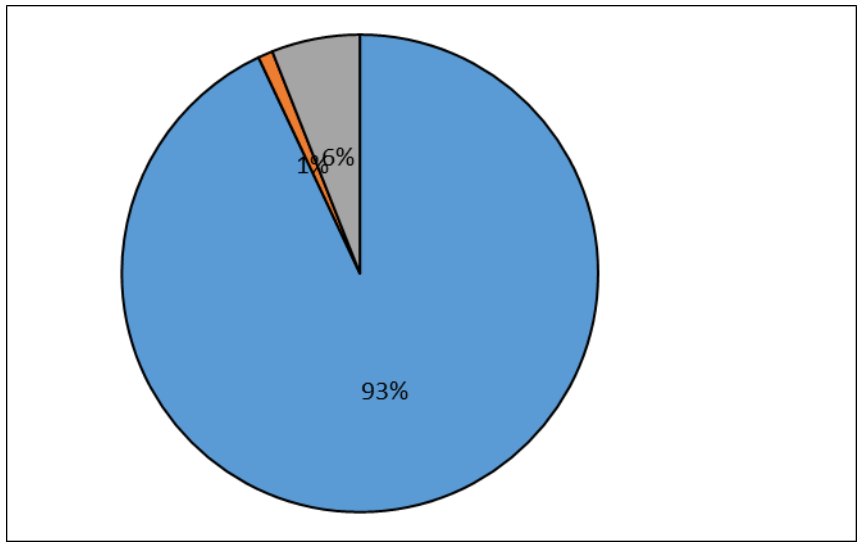

*Source:* Study findings.

The post KAP analysis revealed a significant improvement in the attitude of majority (93%) of the participants towards the issue. Only 1% remained neutral, whereas 6% still showed a poor attitude. According to one participant:

> I have good reading habits, therefore, I remain updated regarding various issues. My knowledge was good about waterborne illnesses, but I never paid much attention how to take measures in order to have clean water for drinking. After these sessions, I felt that I was lucky that I never caught any disease despite drinking contaminated water. Now after the sessions, I have decided not to take any chances. For

the sake of my own health and my family's, I will make sure to at least boil water properly before using it for drinking purposes (Student, Forward School).

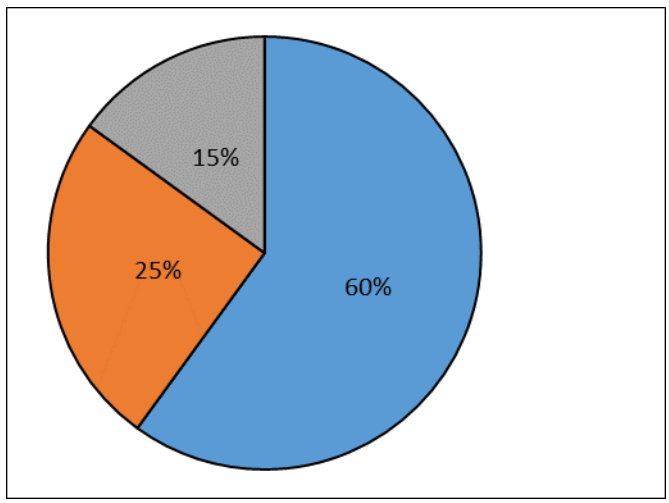
**Figure 4: Attitude Assessment after Intervention**




### *3.2.3. Assessing Practices*

The pre-project analysis show that 60% of the respondents had poor practices regarding cleaning water before drinking, while 25% remained neutral.

**Figure 5: Practice Assessment before Intervention**

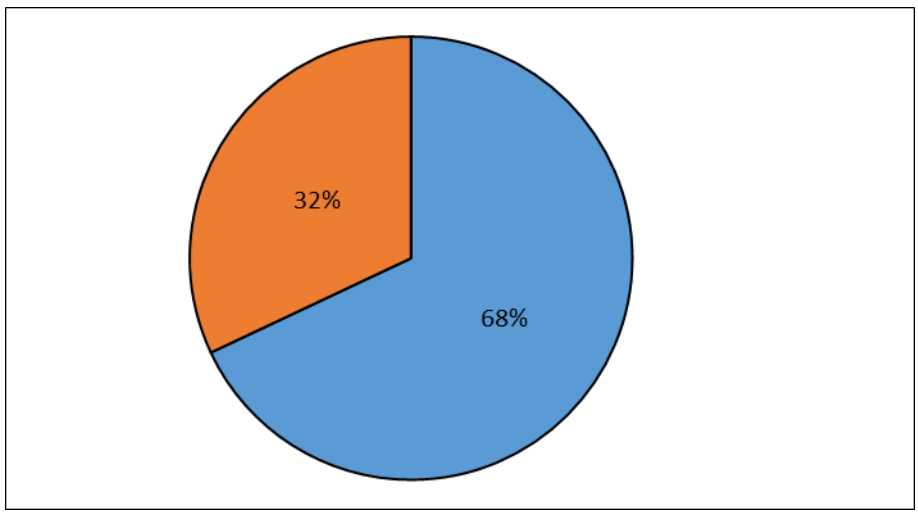



*Source:* Study findings.

The post-intervention KAP analysis showed that around 68% of the participants took some measures to clean water before drinking, while the rest did not take any measures. In the words of a participant:

> The awareness sessions taught us a lot of important things; most importantly they taught us how to clean water before drinking in simpler ways. Although we have not taken any measures yet to clean water before drinking, I have convinced my family members about the alarming situation related to drinking water quality and we have planned to install a filtration machine for drinking water (Student GGDC, Peshawar).

**Figure 6: Practice Assessment after Intervention**




*Source:* Study findings.

Some 56% of the respondents agreed to the fact that government and local community cooperation is necessary for the control of waterborne illnesses.

## 4. DISCUSSION AND CONCLUSION

Improving social indicators through awareness seminars has proved to be an important tool in literature (Gary 2013). The results of this study also found the same pattern. Since water in the target areas was being contaminated because of the poor maintenance of water supply through pipelines, major interventions from the authorities have to come into play. Contamination in water due to a poor supply system is a leading cause of poor quality drinking water throughout the world (United Nations 2003). Various studies have shown seepage which contains magnesium from the surroundings into rusted pipelines, to be a leading cause of stomach problems and many other stomach-related diseases (Shah

2008). Moreover, water storage tanks which are supposed to be cleaned after every three months are not cleaned.

The results of KAP analysis through the questionnaire revealed that majority (52%) of the participants stated waterborne illnesses as a main problem in their area, along with showing dissatisfaction with the quality of water available for drinking purposes. Contaminated water is major cause of many diarrhoeal diseases including cholera, typhoid and stomach worms (Azizullah 2010). In the absence of steps taken by authorities, it is important to improve community practices to take safety measures.

Pre- and post-project KAP analysis of the study revealed a significant rise in the knowledge, attitude and practices of the community. Where majority (52%) of the participants seemed to be aware about the diseases caused by contaminated water, after the awareness sessions, 87% of the participants had their knowledge increased showing encouraging results. Seminars and training sessions build the capacity of people. They serve as a first step towards awakening people towards a problem, and enabling them to work and understand it for their own betterment (Charles 2000). A similar outcome has been found in other designed interventions where awareness sessions played a vital role in improving target issues (Gary 2013). For example, in the rural community of Faqir Wala, Pakistan, the United Nations International Children's Emergency Fund (UNICEF) conducted seminars to enable the community in question to have better access to clean drinking water and hygiene practices. By the virtue of sessions and the water pumps installed for clean water, provided by UNICEF, they were successful in providing the village with clean drinking water and creating awareness among the villagers with regard to negative impacts of using contaminated water (UNICEF 2010).

However, it is rather difficult to assess the role knowledge uplift plays in changing attitudes over the long term. It also depends on the kind of knowledge that is being provided to the participants along with the way it is delivered. Awareness programmes which provide solutions to the problems mostly end up investing knowledge in people by changing their attitudes. In post-project analysis of attitudes, it was revealed that 73% of the participants showed a positive change in their attitude enabling them to prepare their family members regarding clean water drinking practices. This is a clear indication of a changing attitude which is persuasive not only for the participants, but also for the people working for this cause. Malik (2013) also found similar results. However, most participants stressed that the government and NGOs need to be involved in this matter to solve it.

Post-project practice assessment showed that 60% of the participants took practical measures to clean their drinking water. However, they recommended that the government should also provide clean drinking water. For example, initiatives have been taken by the Government of Punjab in which water filtration plants, with a capacity of 500/1000/2000

gallons per hour, were installed in parts of Lahore, Kasur, Okara, and Bahawalpur under the project 'Clean Drinking Water for All' providing clean drinking water to the people whose health has been affected by various diseases (CDWA 2016; Rasheed 2015). Collective efforts by the government, UN agencies and NGOs, will give additional impetus to this issue. At the community level, although awareness generation is a slow process, it does bear long-term and sustainable results (Falkenmark et al. 1989).This intervention specifically targeted females in order to ensure its sustainability since these trained female graduates are the caretakers of their homes; and training them and making them aware would result in a knowledgeable future generation. The post-project survey confirmed the above argument. In the post-project FGDs, the female participants shared that the knowledge they had learned from the sessions was shared by them with the rest of their family members; and that they were now taking necessary steps to ensure practicing what they had learned. While being an overall success, this study had the following limitations:

1. Due to limited time and finances, few areas were targeted. The contaminated water situation is far worse in other areas where similar interventions are needed.
2. Since educational institutes have a very rigid approach towards following their curriculum, educational activities providing knowledge other than from textbooks are not greatly supported. Due to the lack of positive response from schools/colleges, only a limited number of institutes could be accessed.

## 5. RECOMMENDATIONS AND THE WAY FORWARD

1. The government needs to play its role efficiently in providing clean drinking water. Such interventions will reduce the illness burden to a greater extent, further reducing the cost of health care particularly of the public sector.
2. Educational institutes must be involved in community uplift projects. This can be achieved by making such projects/campaigns an important part of their curriculum. A great number of people can be easily reached in a cost-effective manner by educating graduates in schools and colleges.
3. More interventions are needed to create awareness in other settings where the problem of availability of clean drinking water is worse. As a way forward, further research is needed in order to calculate the reduction in health care costs after the improved practices of community.

## 6. ACKNOWLEDGEMENTS

This study was conducted under the HEC's Social Integration Outreach Program (SIOP), in collaboration with the Institute of Management Sciences (IMS), Peshawar. SIOP is an important initiative that highlights the role educational institutes should be playing as part of their social responsibility.

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# Journal Guidelines for Authors

*ISSN 2522-3410*

# JOURNAL OF DEVELOPMENT POLICY, RESEARCH & PRACTICE

## GUIDELINES FOR AUTHORS

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- Only original papers will be accepted.
- The papers will go through a double blind review process.
- Referenced/cited text should be less than 19% of the entire paper.
- Use British spellings and indicate all monetary values in dollars (US$) apart from the local form of currency.
- The authors should provide a 30-word bionote giving their complete name, contact details and brief profile.
- Length of the paper: 4,000-8,000 words.
- Key words should be given at the end of the 150-word abstract.

### Details:

Each submission undergoes a vigorous editorial and double blind peer review process. Author/s need to be cognizant of the fact that during this process, their papers will be edited for substance, language and grammar by a team of referees and expert editors, and their editorial and review decisions will be considered final.

Each paper will be screened through the Higher Education Commission's (HEC) licensed plagiarism detection software. Authors are encouraged to generate their own debate and analysis. Referenced/cited text should not exceed 19% of the paper. SDPI's practices zero tolerance for plagiarism. Authors are requested to rely on recent data and publications in order to enrich the analysis of their paper.

Authors should make sure that their papers follow a standard structure as follows:

### 1. Title

Titles for the paper, tables and figures should be concise and clearly indicate the subject matter being dealt with.

### 2. Abstract and Key Words

The abstract should:

- clearly state the title, theme, objectives, sources of data, and major expected findings.
- be in a narrative form, not in bullet points.
- include the author's full name, a brief bionote as author, of no more than 30 words.

- Followed by abstract, insert key words. Choose the ones that capture important aspects of the paper.

## 3. Sections, Sub-Sections and Structure

Bold all sections and a maximum of 3 digits numbering of sub-sections (i.e. 3.2.1) Sub-section headings should start at the left margin. The paper should follow a standardised structure as follows:

- Title
- Author's name and a 30-word bionote
- Abstract
- Key words
- Introduction
- Methodology
- Results
- Discussion
- Policy Recommendations
- Conclusion
- Tables and Figures
- References

## 4. Lists, Tables and Figures

Provide a list of abbreviations/acronyms used, as well as a Glossary of Key Terms, especially those mentioned in native language with their English translation and brief explanation. Present only important tables and figures that illustrate the points made. Tables and figures should be well-designed and complete to avoid lengthy explanation in the text. Each figure should be presented on a separate page and should not exceed half-a-page in size and should leave margins on both sides. While reproducing data from a diagram or table, or copying the entire table or diagram, in the paper, a reference should be made to the source.

A reference within the text to a table taken from a book should include the author and page (Smith 2005, p.33). Where the source of the data is not the author's own, but obtained from another source, that is, a second-hand reference needs to be cited thus (United Nations 1975 cited in Smith 2005, p.33). Ensure that all graphs, maps and figures can be printed in black and white colour since colour printing of the paper may not be possible.

Captions/Titles should be above each image, figure, box or table along with correct numerical order, whereas the source (in italics) of each should be given at the end of the image, table or box:

**Figure 1: Consumer Confidence, Concerns, Spending and Attitudes to Recession**

{Object/Image}

*Source:* World Bank 2010.

## 5. Images

As the inside pages are printed in black-and-white, colour coding will not be readable Please provide clearly readable images/graphs/maps in black-and-white only. Authors are requested to provide high resolution files of the images.

## 6. Footnotes and Endnotes

For longer explanations, use footnotes indicated using auto numbers. Footnotes should not provide references given within the text. The bionote should be given on the first page using an asterisk (*). Do not use endnotes.

## 7. Direct Quotes

Brief quotations (about 30 words or less) can be included in text. Use single quotations marks/inverted commas, ('Engineers are vital to the survival of the planet' (Stewart 1982, p. 6)). Very lengthy quotations should be given in separate, smaller text, indented paragraphs (Block Quotes).

## 8. Paraphrasing

Use of another scholar's work (even paraphrased) requires proper references. Citation marks are not essential. However, there is a need to provide the original source of information referred to within the text. Further, any paraphrased text without giving its reference source next to it is also academic dishonesty and is not acceptable.

## 9. Acknowledgements

Authors have the liberty to give Acknowledgements at the end of the paper. However, the word limit is 30.

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| | |
|---|---|
| **Title:** | (14pt Times New Roman - Bold) |
| **Name:** | (10.5pt and Italics, Times New Roman) |
| **Paper Length:** | (4,000 – 8,000 words) |
| **Abstract:** | (150 words) |
| **Line Spacing:** | 1.2 |

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| **Indentation:** | Justified |
| **Font Colour:** | Black |

**1. HEADING** (12pt Times New Roman – **Bold** / CAPS**)**

**1.1 Sub-Heading** (12pt Times New Roman– **Bold)**

*1.1.1 Sub-sub heading* (12pt Times New Roman – *Italics*)

## 11. References

The references section should be according to Harvard Citation (Author/Date) style.

- Sources that have been quoted in the research (statistics, statements, terminology, pictures, etc.) should be acknowledged by citing their source reference within the text along with a complete source reference in the Reference section at the end of the document.

- Sources that have been studied during research and have not been quoted should be added in the Bibliography section, which can be given after the list of References.

- The list of references should be arranged in an alphabetical order by authors' surnames. The author's surname is placed first, followed by initials or first name, and then the year of publication. Where an item does not have an author, arrange it by its title.

- If the list contains more than one item published by the same author in the same year, add lower case letters immediately after the year to distinguish them, for example (1983a), (1983b) and so on.

- E-documents and e-books also need to be referenced. If a Web document includes both a date of creation and a date it was last updated, use only the date it was last updated. Use the information from the main or home page for a document on the website which has a series of linked pages. Date of access should be provided.

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